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August 19, 2015

Administrator Gina McCarthy
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Notice of Intent to Sue MTD, Briggs & Stratton, and Lowe's for Violations of the Clean Air Act

Dear Administrator McCarthy:

We are writing to provide notice that our client, the South Carolina Clean Air Initiative ("SCCAI"),¹ intends to file a citizen suit under section 304 of the Clean Air Act ("CAA"), 42 U.S.C. § 7604, against MTD Products Inc., commonly referred to by its brand name as MTD, and its affiliated entities (together "MTD"), Briggs & Stratton Corporation, and Lowe's (collectively "the proposed Defendants") for numerous violations of the CAA.

MTD is an American manufacturer of outdoor power equipment for the mass market. Headquartered in Cleveland, Ohio, USA, the company began in 1932 and is a family-owned, private company. MTD's brands include Bolens®, Cub Cadet, Troy-Bilt, Yard Machines, Remington, MTD®, MTD Gold®, MTD Pro®, Yard-Man®, and Yard Machines®. *See*

http://www.mtdproducts.com/equipment/company_10500_20500_-1.

Briggs & Stratton is a market leader in providing engines to the lawn and garden industry. It boasts an enviable list of OEM customers, including Ariens, John Deere, MTD and others. *See* <http://www.briggsandstratton.com/us/en/engines/lawn-mower-brands> last visited 9.15.2014. Briggs is headquartered in Wisconsin. Unfortunately, it appears that while Briggs promotes itself as environmentally friendly, *see* <http://www.basco.com/Sustainability/Reducing%20Mower%20Emissions/>, it does not meet all of its obligations under the CAA.

Lowe's Companies, Inc. (Lowe's) is a publicly traded national home retailer that has a strategic relationship with MTD and also is liable for the obligations of the CAA for MTD products. *See* EPA

¹ SCCAI can be contacted through its founder Robert Burnett at 864-449-5192 address 101 Andy Ct., Easley, SC 29642 or through the undersigned attorney.

publication OECA 325-F-013-001 “Enforcement Alert”. Lowe's (NYSE: LOW) is a FORTUNE® 100 home improvement company serving approximately 15 million customers a week in the United States, Canada and Mexico. With fiscal year 2013 sales of \$53.4 billion, Lowe's has some 1,717 stores located across 50 states of United States. See http://www.lowes.com/AboutLowe/AnnualReports/annual_report_11/corporate.html (last visited May 15, 2015).

LEGAL AUTHORITY

Section 304 of the CAA allows “any person [to] commence a civil action on his own behalf against any person who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of (A) an emission standard or limitation under this Act or (B) an order issued by the Administrator or a State with respect to such a standard or limitation.” 42 U.S.C. §7604(a). These are commonly referred to as “citizen suits.” An “emission standard or limitation” is defined to include “a schedule or timetable of compliance, emission limitation, standard of performance or emission standard” or “any permit term or condition, and any requirement to obtain a permit as a condition of operations.” 42 U.S.C. § 7604(f)(1)-(4).

SCCAI will set forth facts in its citizen suit evidencing that the proposed Defendants have repeatedly violated and are presently in violation of an emission standard, requirement or limitation. These violations are detailed below and will be further outlined in the Complaint that will be filed in the United States District Court for the District of South Carolina. Because these alleged violations constitute violations of specific emission limitations imposed by the CAA, they may be enforced by citizen suit under section 304 of the CAA. The proposed Defendants are potentially liable for violations under section 213 of the CAA and subject to a penalty of up to \$37,500 per violation for each day of violation. Furthermore, the proposed Defendants may not seek to be indemnified by their suppliers for CAA violations under the relevant case law. See, e.g., *United States v. J & D Enterprises of Duluth*, 955 F. Supp. 1153 (D. Minn. 1997) (finding indemnity for Clean Air Act violation penalties contrary to public policy).

EMISSION WARRANTY VIOLATIONS

Section 207(a) of the Clean Air Act (42 U.S.C. § 7541(a)) requires certifying manufacturers to warrant to purchasers that their engines and equipment are designed, built, and equipped to conform at the time of sale to the applicable regulations for their full useful life. See also 42 U.S.C. § 7547(d) (incorporating the standards of § 7541 to nonroad engines and vehicles). The manufacturer must include a warranty that the engines and equipment are free from defects in materials and workmanship that would cause them to fail to conform to the applicable regulations during the specified warranty period. Several provisions in the Code of Federal Regulations specify the mode of communication of the Environmental Control System (ECS) components warranty, its content, and duration requirements for on-road and off-highway (to include marine spark-ignition) engines.

Our review of MTD's and Briggs & Stratton's warranties on several of their products has revealed that none are fully compliant with the Clean Air Act regulations. Furthermore, SCCAI recently obtained from Lowe's a Bolens 125cc Gas Push Mower with a Briggs & Stratton Engine. The mower came with owner's manuals for both the Briggs & Stratton engine and the MTD mower. Below we have detailed the most significant violations that we have discovered.

MTD

MTD's warranty violates 40 C.F.R. 1054.125(f) *Source of parts and repairs*. The regulation requires in part:

State clearly on the first page of your written maintenance instructions that a repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the engine be serviced by your franchised dealers or any other service establishments with which you have a commercial relationship.

The MTD warranty does not include the required language. Additionally, the warranty states that "Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer." The warranty clearly violates the regulatory prohibition on requiring the use of only authorized facilities.

MTD's warranty language detailed in the previous paragraph also violates 40 C.F.R. § 1068.101(b)(6) *Warranty, recall, and maintenance instructions*. The regulation states in part:

Also, except as specifically provided by regulation, you are prohibited from directly or indirectly communicating to the ultimate purchaser or a later purchaser that the emission-related warranty is valid only if the owner has service performed at authorized facilities or only if the owner uses authorized parts, components, or systems. We may assess a civil penalty up to \$37,500 for each engine or piece of equipment in violation.

Limiting the warranty coverage to authorized facilities is a clear violation of the regulation.

MTD's warranty violates 40 C.F.R. § 1054.120(f)(1) *Requirements related to warranty claims*. The regulation states in part:

You are required at a minimum to meet the following conditions to ensure that owners will be able to promptly obtain warranty repairs:

- (1) You must provide and monitor a toll-free telephone number **and an e-mail address** for owners to receive information about how to make a warranty claim, and how to make arrangements for authorized repairs.

(Emphasis added). The MTD warranty does not provide the required email address to assist in arranging warranty repairs.

MTD's warranty violates 40 C.F.R. § 1054.120(b)(1) *Warranty Period*. The regulations states that: "The minimum warranty period is two years except as allowed under paragraph (b)(2) or (3) of this section." Neither exception applies. The MTD warranty is limited to only one (1) year.

MTD's warranty violates 40 C.F.R. § 1054.120(a) *General Requirements*. This regulation states:

You must warrant to the ultimate purchaser **and each subsequent purchaser** that the new engine, including all parts of its emission control system, meets two conditions:

- (1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.
- (2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

(Emphasis added). The MTD warranty states: "This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift."

MTD's warranty on the mower also violates 40 C.F.R. § 1054.115(c) *Altitude adjustments*. The regulation states in part:

If you rely on an altitude kit for certification, you must identify in the owners manual the altitude range for which you expect proper engine performance and emission control with and without the altitude kit; you must also state in the owners manual that operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance.

The MTD owner's manual does not include any altitude information or warnings about increased emissions and decreased fuel efficiency and performance.

Briggs & Stratton

MTD may argue that its warranty is in addition to the warranty offered by Briggs & Stratton for the mower. Nothing in the CAA regulations allow for a manufacturer such as MTD to pass its CAA responsibilities onto a component manufacturer. Additionally, such reliance would be misplaced as the Briggs & Stratton warranty also has many violations of the CAA.

Briggs & Stratton's warranty violates 40 C.F.R. 1054.125(f) *Source of parts and repairs*. The regulation requires in part:

State clearly on the first page of your written maintenance instructions that a repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the engine be serviced by your franchised dealers or any other service establishments with which you have a commercial relationship.

The Briggs & Stratton warranty does not include the required language. Worse, the warranty states: "For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at BRIGGSandSTRATTON.COM. The purchaser must contact the Authorized Service Dealer, and then make the product available to the Authorized Service Dealer for inspection and testing." Additionally, the warranty states that: "This warranty does not cover engine damage or performance problems caused by... The use of parts that are not original Briggs & Stratton parts." Also, the warranty states "Warranty service is available only through Briggs & Stratton Authorized Service Dealers."

Briggs & Stratton's warranty language detailed in the previous paragraph also violates 40 C.F.R. § 1068.101(b)(6) *Warranty, recall, and maintenance instructions*. The regulation states in part:

Also, except as specifically provided by regulation, you are prohibited from directly or indirectly communicating to the ultimate purchaser or a later purchaser that the emission-related warranty is valid only if the owner has service performed at authorized facilities or only if the owner uses authorized parts, components, or systems. We may assess a civil penalty up to \$37,500 for each engine or piece of equipment in violation.

Limiting the warranty coverage to authorized service dealers and requiring the use of only Briggs & Stratton parts is a clear violation of the regulation.

Briggs & Stratton's warranty violates 40 C.F.R. § 1054.120(b)(1) *Warranty Period*. The regulations states that: "The minimum warranty period is two years except as allowed under paragraph (b)(2) or (3) of

this section.” Neither exception applies. On page 10 of the owner’s manual Briggs & Stratton set forth a chart entitled “Standard Warranty Terms”. That chart divides the terms of coverage into Consumer Use and Commercial Use. The term for Commercial Use for “All Other Briggs & Stratton Engines” is shown as 90 days, not the required 2 year minimum. The CAA does not allow manufacturers to set a different CAA coverage for commercial as opposed to consumer use.

Briggs & Stratton’s warranty violates 40 C.F.R. § 1054.120(f)(1) *Requirements related to warranty claims*. The regulation states in part:

You are required at a minimum to meet the following conditions to ensure that owners will be able to promptly obtain warranty repairs:

- (1) You must provide and monitor a toll-free telephone number **and an e-mail address** for owners to receive information about how to make a warranty claim, and how to make arrangements for authorized repairs.

(emphasis added). The Briggs & Stratton warranty does not provide the required email address to assist in arranging warranty repairs.

Briggs & Stratton’s warranty on the mower also violates 40 C.F.R. § 1054.115(c) *Altitude adjustments*. The regulation states in part:

If you rely on an altitude kit for certification, you must identify in the owners manual the altitude range for which you expect proper engine performance and emission control with and without the altitude kit; you must also state in the owners manual that operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance.

The Briggs & Stratton’s owner’s manual does not include any altitude information or warnings about increased emissions and decreased fuel efficiency and performance.

40 C.F.R. § 1068.115(b)(6) prohibits a manufacturer from denying warranty claims due to use of any fuels commonly available unless the vehicle’s written maintenance instructions state the fuel would be harmful. Given the availability of diesel fuels in the U.S. and Canada, we believe Briggs & Stratton may illegally, and without redress for affected consumers, have denied valid ECS warranty claims in violation of this regulation.

CONSEQUENCES OF NOT ENFORCING THE CAA

The EPA can most efficiently “protect and enhance the quality of the Nation’s air resources” by holding directly accountable manufacturers like the proposed Defendants that engage in the CAA violations alleged above with products intended for the U.S. market. *See* 42 U.S.C. § 7401(b). By pursuing the proposed Defendants, the EPA can most effectively remedy prior and ongoing emissions-related and warranty violations and deter the proposed Defendants future non-compliance.

If the EPA was to elect not to file a complaint against the proposed Defendants, it will result in the following unintentional, perverse consequences in contradiction to the goals of the CAA and Congressional intent. First, it will send a signal to both the American and global market manufacturers (like the proposed Defendants) that the certificates of conformity are merely a formality that carries no force of law. Manufacturers can produce products for use in the U.S. that are ultimately non-compliant with the regulations designed to protect the environment without any concern about the risk of EPA enforcement.

Next, the EPA's lack of enforcement of its regulations will create a chaotic, uneven competitive-playing field. Some companies will still comply with the regulations and follow the letter of the law while other unscrupulous manufacturers will produce engines that they know will ultimately fall out of compliance with emission requirements. By avoiding the concern of manufacturing an engine that remains true to the COC issued by the EPA, the unscrupulous manufacturers will be able to turn greater profits than their competitors who choose to follow the law as written.

Additionally, the failure to include the proper warranty language in the proposed Defendants' owner's manuals will hurt both consumers and the environment. Consumers will be illegally denied or overcharged for mandated warranties for their products and will be unable to properly evaluate a product's emission capabilities before purchasing due to the inadequate disclosures.

Finally, because of MTD's and Briggs & Stratton's violations for the engines they produce or introduce into the stream of commerce, third parties that sell products with their engines, parts for the engines, or the engines themselves are potentially liable for EPA regulation violations. Just like the consumers who have purchased the products with the defects that lead to their non-compliance, these third party sellers have been damaged by MTD and Briggs & Stratton. These entities are unknowingly responsible for potentially significant excess harmful emissions into the environment. EPA cannot purport to protect the environment and yet allow a disregard for its regulations to go unpunished.

CITIZEN SUIT RELIEF

As stated, to achieve the CAA goals and objectives outlined above, the EPA should file a complaint against the proposed Defendants to hold them accountable for their emission and regulatory violations. However, if the EPA does not file suit, SCCAI intends to seek the following relief:

1. A declaratory judgment finding that each of the warranty issues cited are in violation of the CAA.
2. Injunctive relief enjoining the proposed Defendants and all affiliated or related companies from any further violations of the CAA and commanding them to secure COCs for all engines utilized by the proposed Defendants.
3. Injunctive relief commanding the proposed Defendants to include the proper warranty language in its owner's manuals.
4. Assessment of appropriate civil penalties of up to \$37,500 per day for each violation and for attorneys' fees and costs.
5. Corrective measures, including a corporate compliance plan and offset projects, if necessary, to prevent future CAA violations and offset of excess emissions, including those from fires and burning oil/blown gaskets.
6. A remedy for consumers who have paid for but obtained defective goods, to include re-issuance of valid ECS warranties and other incentives, to make consumers whole, along with a mechanism to inform consumers of such campaigns.
7. An obligation for the proposed Defendants to ensure certification data is obtained utilizing meaningful and recent duty cycles moving forward.

If the EPA will not act, we, as SCCAI's counsel, are equipped to handle this citizen suit given our

knowledge and expertise of the applicable legislation. This would enable efficient negotiation, settlement, and implementation of a solution that benefits the environment, taxpayers and consumers.

This letter provides the official notice of SCCAI's intent to sue as required by section 304(b) of the CAA. We hope to work with the EPA in promoting the goals of the CAA by holding responsible parties accountable for past and ongoing violations and deterring future violations. While we understand that the EPA has limited resources and must make difficult enforcement decisions, we strongly believe that pursuing these companies for their repeated violations should be a top priority.

While SCCAI ultimately would like to avoid unnecessary litigation on its own behalf, we intend to bring suit following 60 days after this letter unless we are informed by the EPA that it intends to file an enforcement action of its own.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Haltiwanger", with a long, sweeping horizontal line extending from the end of the name.

Daniel S. Haltiwanger

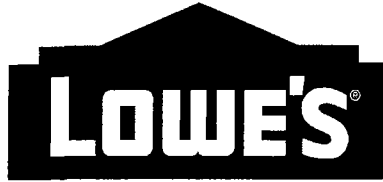
Cc: LOWES
Ross W. (Bill) McCanless, Esq. Genral Counsel and Robert A. Niblock, CEO
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MTD
Robert Moll, CEO & Lawrence Muscarella, Esq., VP GC

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Shop online 24/7
at Lowe.com



Contact Us
Lowe's Customer Care
1605 Curtis Bridge Road
Wilkesboro, NC 28697

Phone: 1-800-445-6937
Email: customer care@lowes.com

Thank You for Shopping at Lowe's!
We hope you enjoy your new purchase!



Page 1 of 2

Refer to this information for all inquiries

Sold To:	Ship To:	Order Information:
		Order #: 314158990
		Order Date: 06/05/2015
		Location: 907
		Invoice #: 96837
		Total Packages: 1

Package #	Item #	Item Description	Model #	Qty. Ordered	Qty. Shipped	Unit Price	Extended Price
M49600856	538022	125cc 20-in Gas Push Lawn Mower with Briggs & Stratton Engine	11A-020W765	1	1	\$149.00	\$149.00

of Items Discounted: Total Savings: \$13.99

Tender Information

If you ordered more than the above-shown item(s), the rest of your items will be shipped and billed separately. A separate shipping document will be enclosed with that portion of your order.

Check the status of your order by signing in to your Lowe.com account and select **Purchases**.

\$159.43

Payment Information

Merchandise Total:	\$159.43
Shipping / Delivery:	\$0.00
Total Tax:	\$10.43
Shipment Total:	\$159.43

Please detach this slip and enclose with your return

Need to return an item?

We hope you love what you ordered, but if something isn't right, let us know. We're happy to exchange your item for something new or refund your money. For a quick, hassle-free return, you can return your items at any Lowe's store, or use the return shipping label included with your purchase to return your items by mail.

See reverse side for complete details.

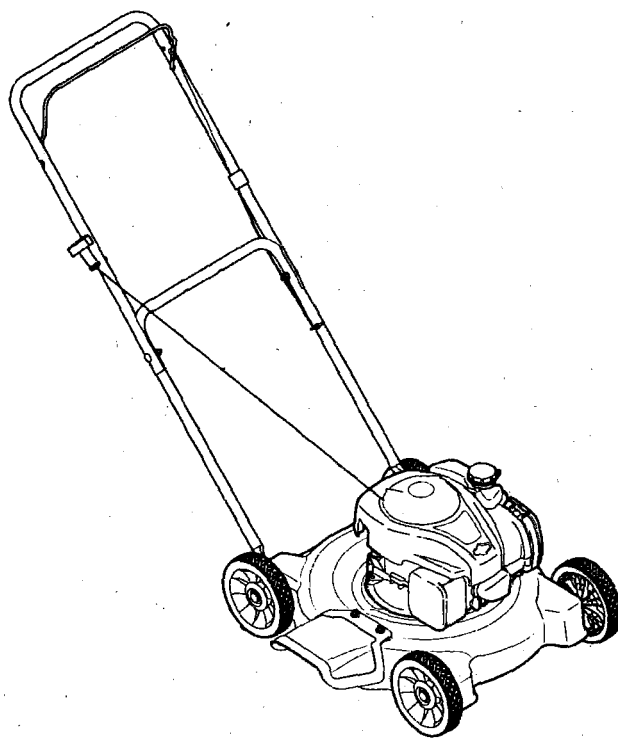
Sold To

Order Information

Order #:	314158990
Order Date:	06/05/2015
Location:	907
Invoice #:	96837



OPERATOR'S MANUAL



Push Mower — Model Series 020

WARNING

READ AND FOLLOW ALL SAFETY RULES AND INSTRUCTIONS IN THIS MANUAL
BEFORE ATTEMPTING TO OPERATE THIS MACHINE.
FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

Thank You

Thank you for purchasing a Lawn Mower manufactured by MTD. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. We reserve

the right to change product specifications, designs and equipment without notice and without incurring obligation.

If you have any problems or questions concerning the machine, phone your local authorized MTD service dealer or contact us directly. MTD's Customer Support telephone numbers, website address and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to *right* and *left* side of the machine are observed from the operating position.

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your machine, for more information.

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Record Product Information

Before setting up and operating your new equipment, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate by standing at the operator's position and looking down at the rear of the deck. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

MODEL NUMBER

--	--	--	--	--	--	--	--	--	--	--	--

SERIAL NUMBER

--	--	--	--	--	--	--	--	--	--	--	--

Customer Support

Please do NOT return the machine to the retailer or dealer without first contacting the Customer Support Department.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this machine, you can seek help from the experts. Choose from the options below:

◇ Visit us on the web at www.mtdproducts.com



See How-to Maintenance and Parts Installation Videos at www.mtdparts.com/KnowledgeCenter

◇ Call a Customer Support Representative at (800) 800-7310 or (330) 220-4683

◇ Write to MTD LLC • P.O. Box 361131 • Cleveland, OH • 44136-0019



WARNING: This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol. **HEED ITS WARNING!**

CALIFORNIA PROPOSITION 65



WARNING: Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.



WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. *Wash hands after handling.*



DANGER: This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating fingers, hands, toes and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

General Operation

1. Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be completely familiar with the controls and the proper use of this machine before operating it.
3. This machine is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. This machine has been designed to perform one job: to mow grass. Do not use it for any other purpose.
4. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and should be trained and supervised by an adult.
5. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use this machine.
6. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects, which could be tripped over or picked up and thrown by the blade. Thrown objects can cause serious personal injury.
7. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction, which may cause discharged material to ricochet back toward the operator.
8. To help avoid blade contact or a thrown object injury, stay in operator zone behind handles and keep children, bystanders, helpers and pets at least 75 feet from mower while it is in operation. Stop machine if anyone enters area.
9. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
10. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Never operate this machine in bare feet, sandals, slippery or light-weight (e.g. canvas) shoes.
11. Do not put hands or feet near rotating parts or under the cutting deck. Contact with blade can amputate fingers, hands, toes and feet.

12. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
13. Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the mower if you are falling; release the handle immediately.
14. Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
 - a. Step back from mower to fully extend your arms.
 - b. Be sure you are well balanced with sure footing.
 - c. Pull the mower back slowly, no more than half way toward you.
 - d. Repeat these steps as needed.
15. Do not operate the mower while under the influence of alcohol or drugs.
16. Do not engage the self-propelled mechanism on machines so equipped while starting engine.
17. The blade control is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control must operate easily in both directions and automatically return to the disengaged position when released.
18. Never operate the mower in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your footing, release the blade control handle immediately and the blade will stop rotating within three seconds.
19. Mow only in daylight or good artificial light. Walk, never run.
20. Stop the blade when crossing gravel drives, walks or roads.
21. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
22. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the blade control is released. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
23. Never operate mower without proper trail shield, discharge cover, grass catcher, blade control or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.
24. Muffler and engine become hot and can cause a burn. Do not touch.
25. Never attempt to make a wheel or cutting height adjustment while the engine is running.
26. Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.
27. When starting engine, pull cord slowly until resistance is felt, then pull rapidly. Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises or sprains could result.
28. If situations occur which are not covered in this manual, use care and good judgement. Contact Customer Support for assistance or the name of the nearest service dealer.

Slope Operation

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it. For your safety, use the slope gauge included as part of this manual to measure slopes before operating this machine on a sloped or hilly area. If the slope is greater than 15 degrees, do not mow it.

Do:

1. Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
2. Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles.
3. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance, release the blade control handle immediately and the blade will stop rotating within three (3) seconds.

Do Not:

1. Do not mow near drop-offs, ditches or embankments, you could lose your footing or balance.
2. Do not mow slopes greater than 15 degrees as shown on the slope gauge.
3. Do not mow on wet grass. Unstable footing could cause slipping.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under watchful care of a responsible adult other than the operator.
2. Be alert and turn mower off if a child enters the area.
3. Before and while moving backwards, look behind and down for small children.
4. Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the mower.
5. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
6. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
7. After stopping engine, remove Electric Start Push Key (if equipped) and keep it in a safe place out of the reach of children.

Service

Safe Handling Of Gasoline:

1. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes, which can ignite. Wash your skin and change clothes immediately.
2. Use only an approved gasoline container.
3. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
4. Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
5. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
6. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
7. Never fuel machine indoors because flammable vapors will accumulate in the area.
8. Never remove gas cap or add fuel while engine is hot or running. Allow engine to cool at least two minutes before refueling.
9. Never over fill fuel tank. Fill tank to no more than 1 inch below bottom of filler neck to provide for fuel expansion.
10. Replace gasoline cap and tighten securely.
11. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting engine.
12. Never store the machine or fuel container near an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
13. To reduce fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
14. Allow machine to cool at least 5 minutes before storing.

General Service:

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
2. Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine and remove Electric Start Push Key (if equipped) to prevent unintended starting.

3. Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked, worn) Replace blade with the original equipment manufacturer's (O.E.M.) blade only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
4. Mower blades are sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing them.
5. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
6. Never tamper with safety devices. Check their proper operation regularly.
7. After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
8. Never attempt to make a wheel or cutting height adjustment while the engine is running.
9. Grass catcher components, discharge cover, and trail shield are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
10. Do not change the engine's governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
11. Check fuel line, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
12. Do not crank engine with spark plug removed.
13. Maintain or replace safety and instruction labels, as necessary.
14. Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.
15. According to the Consumer Products Safety Commission (CPSC) and the U.S. Environmental Protection Agency (EPA), this product has an *Average Useful Life* of seven (7) years, or 140 hours of operation. At the end of the *Average Useful Life* have the machine inspected annually by an authorized service dealer to ensure that all mechanical and safety systems are working properly and not worn excessively. Failure to do so can result in accidents, injuries or death.

Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice Regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM), Oxidizing Catalyst (OC), Secondary Air Injection (SAI) and Three Way Catalyst (TWC) if so equipped.

Spark Arrestor












WARNING: This machine is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrestor meeting applicable local or state laws (if any).

If a spark arrestor is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.

A spark arrestor for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

Safety Symbols

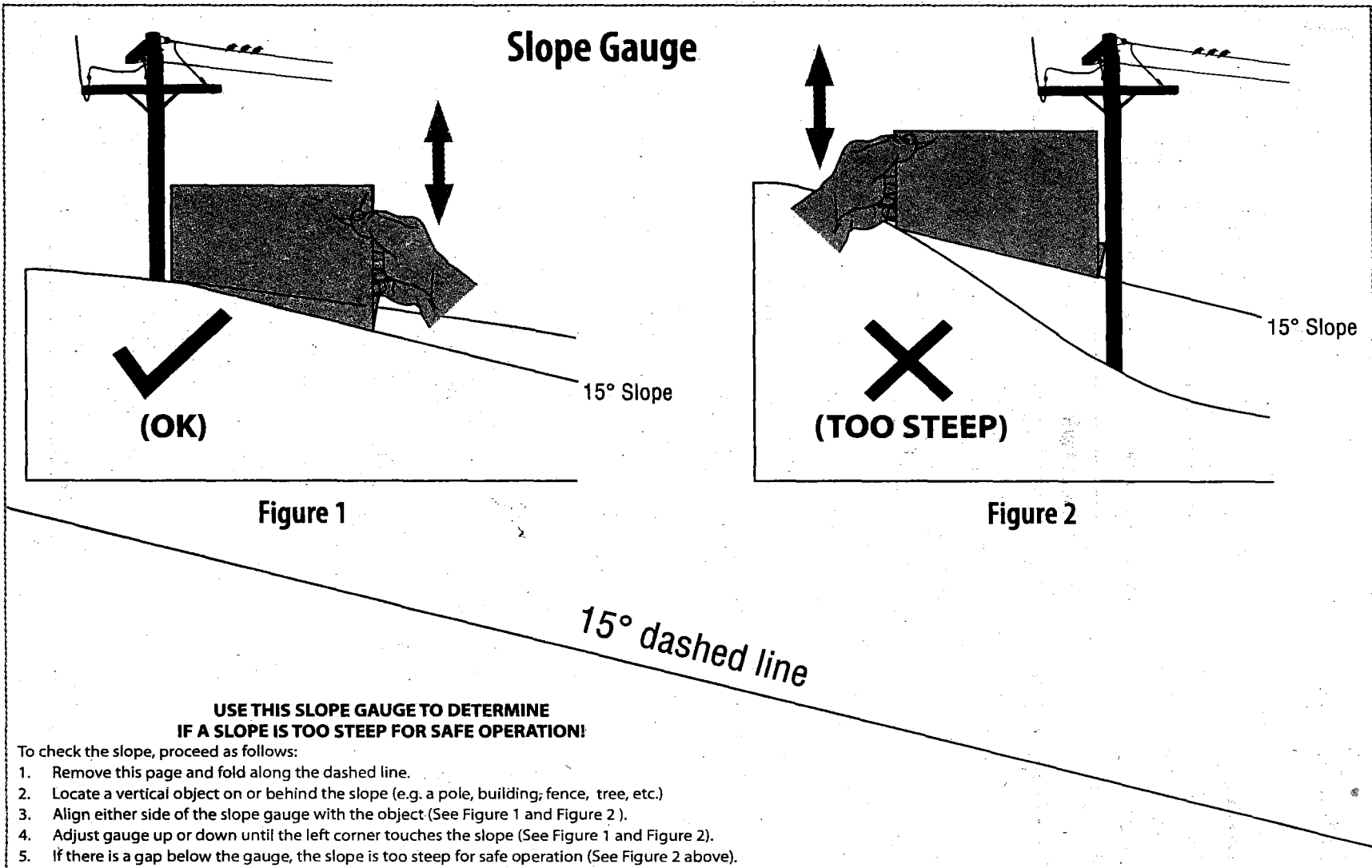
This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbol	Description
	READ THE OPERATOR'S MANUAL(S) Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate.
	DANGER — ROTATING BLADES To reduce the risk of injury, keep hands and feet away. Do not operate unless discharge cover or grass catcher is in its proper place. If damaged, replace immediately.
	DANGER — BYSTANDERS Do not mow when children or others are around.
	DANGER — HAND/ FOOT CUT Keep hands and feet away from rotating parts.
	DANGER — THROWN DEBRIS Remove objects that can be thrown by the blade in any direction. Wear safety glasses.
	DANGER — SLOPES Use extra caution on slopes. Do not mow slopes greater than 15°.
	WARNING—GASOLINE IS FLAMMABLE Allow the engine to cool at least two minutes before refueling.
	WARNING— CARBON MONOXIDE Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
	WARNING— HOT SURFACE Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.



WARNING: Your Responsibility—Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!



WARNING! Slopes are a major factor related to tip-over and roll-over accidents which can result in severe injury or death. Do not operate machine on slopes in excess of 15 degrees. All slopes require extra caution. Always mow across the face of slopes, never up and down slopes.

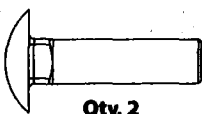



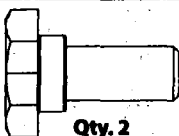
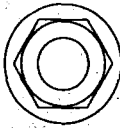
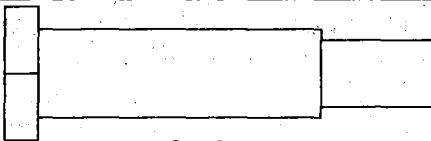
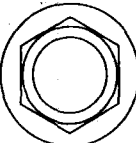
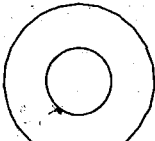
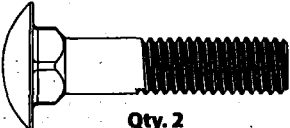
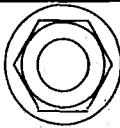
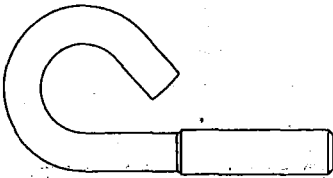

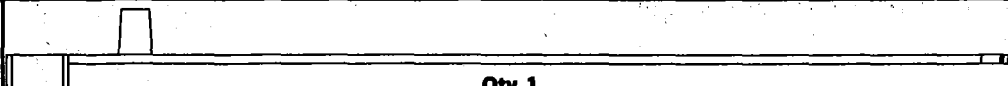
Assembly & Set-Up

3

Contents of Carton

- One Lawn Mower
- One Hardware Pack
- One Blade Control
- One Lawn Mower Operator's Manual
- Four Wheels
- One Chute Deflector
- One Engine Operator's Manual
- One Upper & Lower Handle
- One Bottle of Oil

Hardware Pack

Group 1	 Qty. 2  Qty. 2  Qty. 2
Group 2	 Qty. 2  Qty. 2  Qty. 4
Group 3	 Qty. 4  Qty. 4  Qty. 4
Group 4	 Qty. 2  Qty. 2
Group 5	 Qty. 1  Qty. 1
Group 6	 Qty. 1

Tools Required

- 7/16-inch wrench (or adjustable wrench)
- 1/2-inch wrench (or adjustable wrench)
- 9/16-inch wrench (or adjustable wrench)
- 3/4-inch wrench (or adjustable wrench)

Assembly

NOTE: This lawn mower is shipped without gasoline or oil in the engine. Fill up the gasoline and oil as instructed in the accompanying engine manual BEFORE operating your mower.

Chute Deflector

NOTE: Use the hardware in Group 1 to complete the following steps.

1. Align the holes on the chute deflector with the corresponding holes on the deck surface.
2. Insert carriage screws up through the underside of the deck and through the chute deflector. See Figure 3-1.

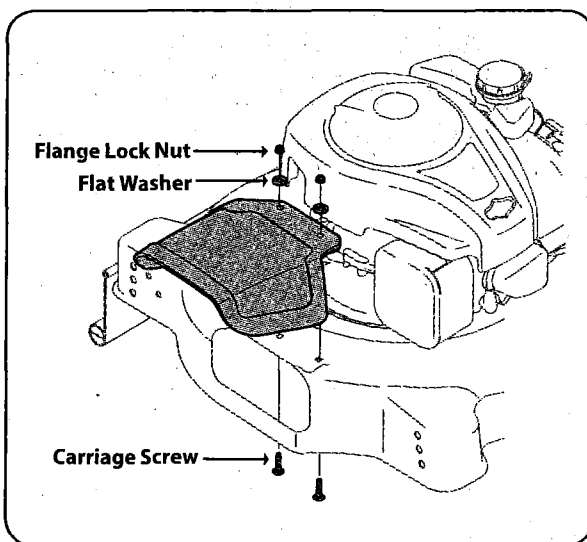


Figure 3-1

3. Secure each screw with a washer and lock nut.

Lower Handle

NOTE: Use the hardware in Groups 2 and 4 to complete the following steps.

1. Lift the rear of the deck and place it on a block of wood to secure it.
2. Place the lower handle over the deck and align the holes on the deck with the corresponding holes on the handle.
3. Secure the lower handle to the deck using the hex screws, shoulder screws, and flange lock nuts. See Figure 3-2.

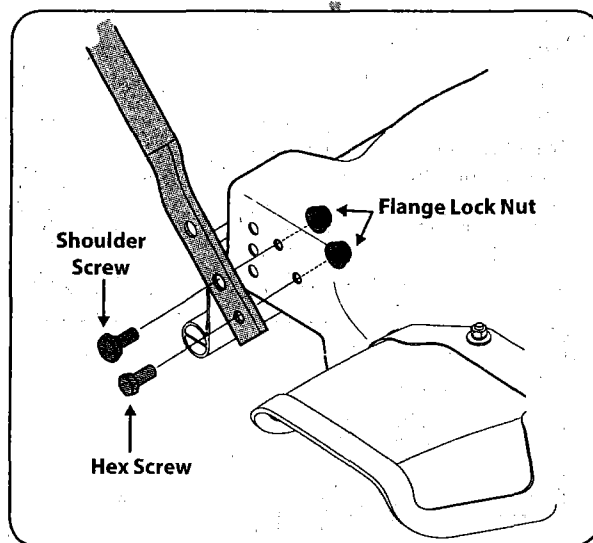


Figure 3-2

Upper Handle

NOTE: Use the hardware in Groups 2 and 4 to complete the following steps.

1. Place the upper handle in position over the lower handle keeping the blade control handle facing up.
2. Secure the upper handle to the lower handle using the carriage bolts and lock nuts from Group 4 of the hardware pack. See Figure 3-3.

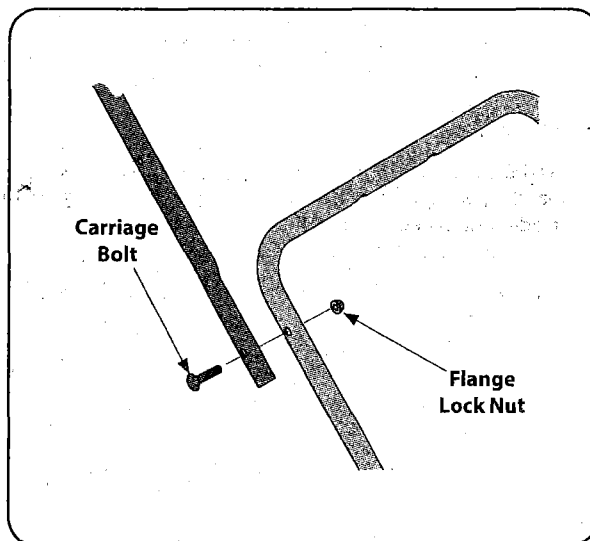


Figure 3-3

Wheels

NOTE: Use the hardware in Group 3 to complete the following steps.

The holes in the deck provide three cutting heights. Use corresponding holes when attaching all four wheels (i.e. for the lowest cutting position, assemble each wheel at the highest hole on the deck). Refer to the Cutting Height Adjustment section for more information.

1. Secure each wheel to the deck as shown in Figure 3-4.

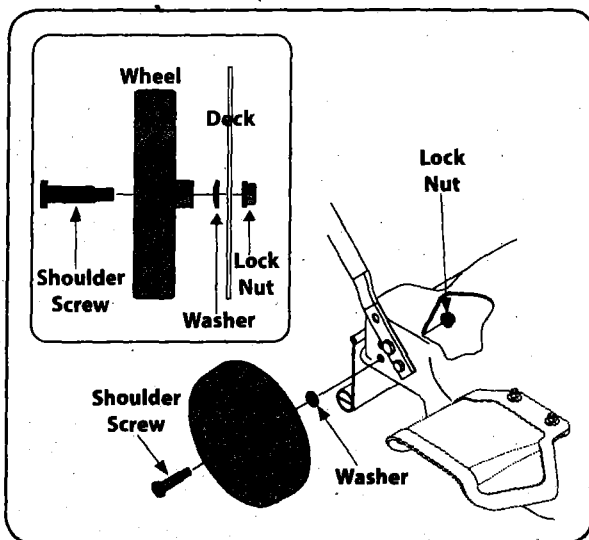


Figure 3-4

NOTE: The cupped side of each washer should be pressed against the deck.

Blade Control

NOTE: If the blade control is secured and in place on the upper handle, you may skip the following three steps. If, however, the blade control became displaced either during shipping or during assembly, reattach it as follows:

1. Insert the curved end of the blade control into the center hole located on the right side of the upper handle. See Figure 3-5.

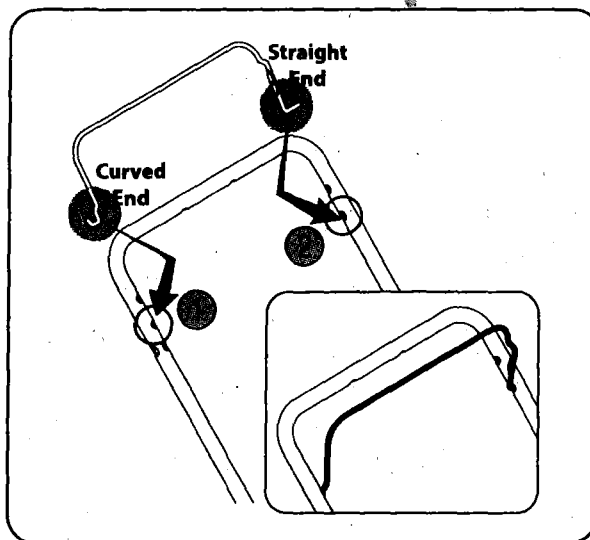


Figure 3-5

2. Gently squeeze the blade control inward and insert the straight end into the lower hole located on the left side of the upper handle. See Figure 3-5.
3. Check to confirm that the blade control pivots freely against the upper handle:

NOTE: Your mower has been supplied with one of two types of control cables - one that is secured with a snap fitting as shown in Figure 3-7 or one that is secured with a stud as shown in Fig. 3-8. Make note of the cable supplied with your mower and follow the appropriate steps below.

Control Cable (Snap Fitting)

Unwrap the control cable from the engine and route it under the lower handle.

Z Fitting

1. To make it easier to attach the Z fitting, temporarily remove the left side of the blade control as shown in Figure 3-6.

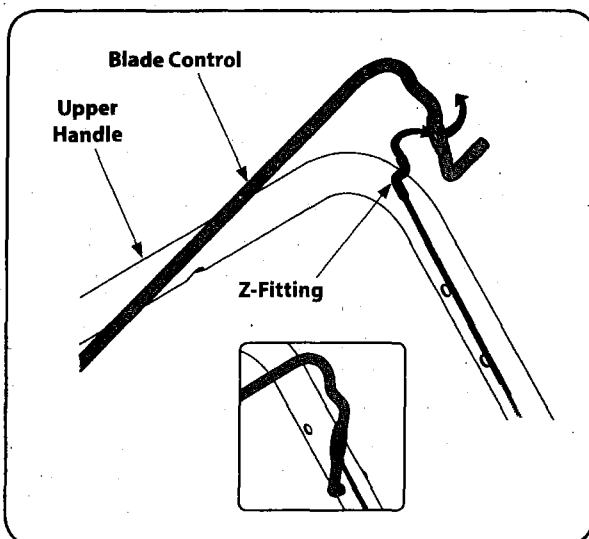


Figure 3-6

2. Hook the Z end of the brake cable into the control from the inside to outside. See Figure 3-6.
3. Reattach the left side of the blade control.

Securing Control Cable

NOTE: Use the hardware in Group 6 to complete the following steps.



WARNING: The cable must be routed properly to avoid contact with all sharp edges and hot surfaces. Such contacts damage the cable and render the controls inoperative.

1. Press the stud found inside the snap fitting into the hole found on the left side of the upper handle, as shown in Figure 3-7.

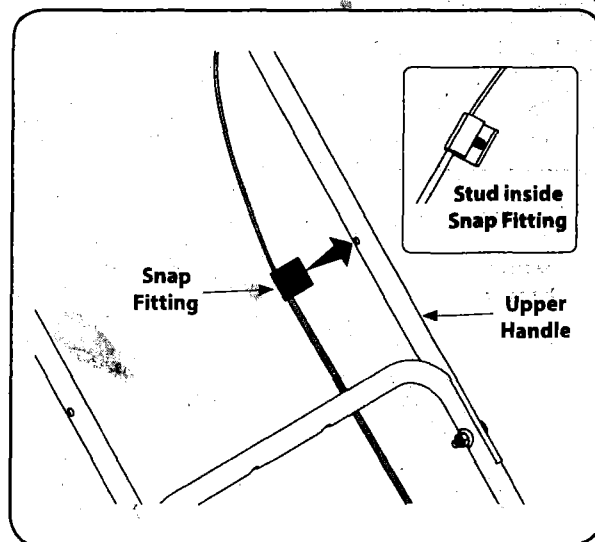


Figure 3-7

2. Secure the cable to the lower left handle with a cable tie. Trim off the extra length of the cable tie.

Control Cable (Stud)

Unwrap the control cable from the engine and route it under the lower handle.

Securing Control Cable



WARNING: The cable must be routed properly to avoid contact with all sharp edges and hot surfaces. Such contacts damage the cable and render the controls inoperative.

1. Press the stud found on the cable fitting into the hole found on the left side of the upper handle, as shown in the Figure 3-8 insets.

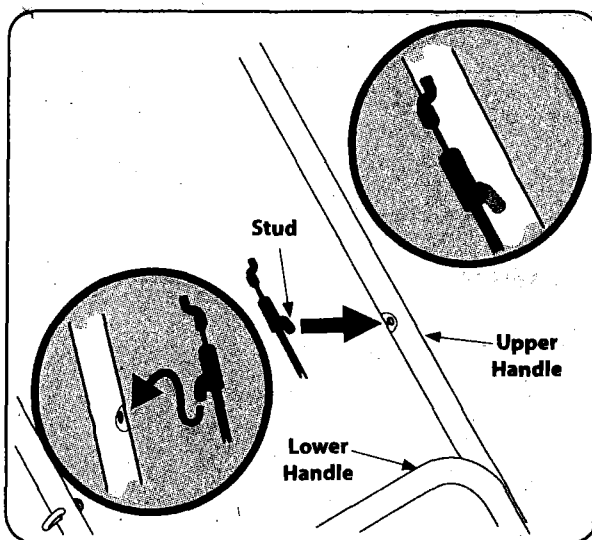


Figure 3-8

Z Fitting

NOTE: Use the hardware in Group 6 to complete the following steps.

1. To make it easier to attach the Z fitting, temporarily remove the left side of the blade control as shown in Figure 3-9.

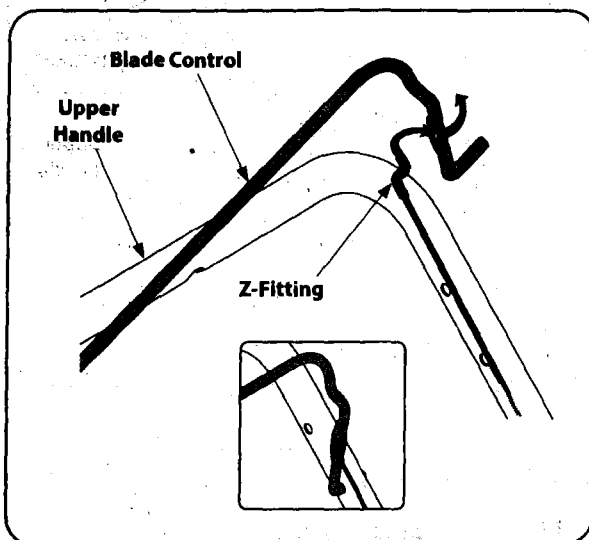


Figure 3-9

2. Pull up on the Z end of the brake cable and hook it into the control from the inside to outside. See Figure 3-9.
3. Reattach the left side of the blade control.
4. Secure the cable to the lower left handle with a cable tie. Trim off the extra length of the cable tie.

Starter Rope

NOTE: Use the hardware in Group 5 and refer to Figure 3-10 to complete the following steps.

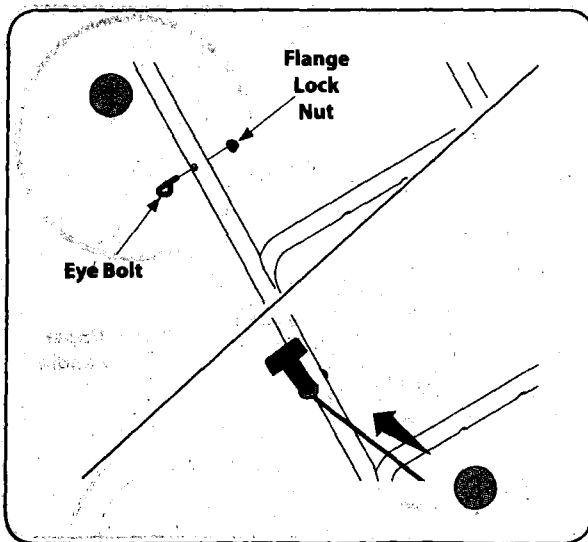


Figure 3-10

1. Attach the eye bolt to the upper handle and loosely thread the lock nut on to secure it. Do NOT tighten. See Figure 3-10.
2. With the spark plug wire disconnected and grounded, depress the blade control and pull the rope out of the engine.
3. Loop the rope through the eye bolt. See Figure 3-10.
4. Tighten the eye bolt to the handle using the lock nut. DO NOT overtighten.

Adjustments

Cutting Height

1. Remove the carriage bolts and related hardware from the wheels. See Figure 3-11.

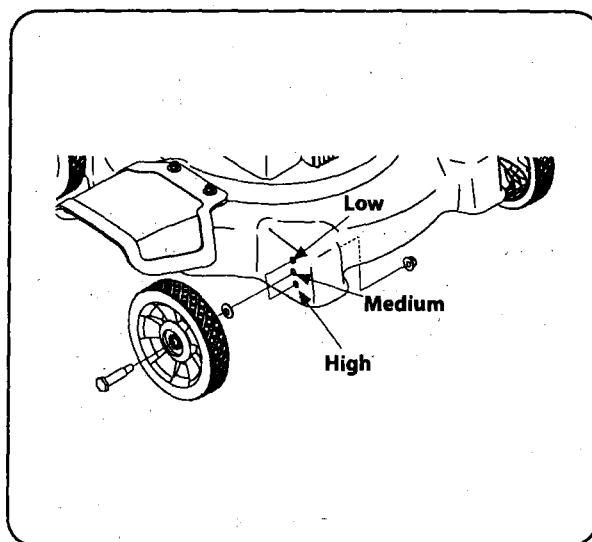


Figure 3-11

2. Reattach the wheels with carriage bolts at another hole. Remember to attach ALL wheels at the same relative position to ensure an even cut. Refer to instructions for Attaching The Wheels earlier in this section. For a higher cutting height, use the lower hole on the deck. For a lower cutting height, use the upper hole.

Set-Up

Gas and Oil Fill-Up

Refer to the separate engine owner's manual for additional engine information.

1. Add oil provided before starting unit for the first time out of the box.
2. Service the engine with gasoline as instructed in the separate engine owner's manual.



WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and any other sources of ignition.

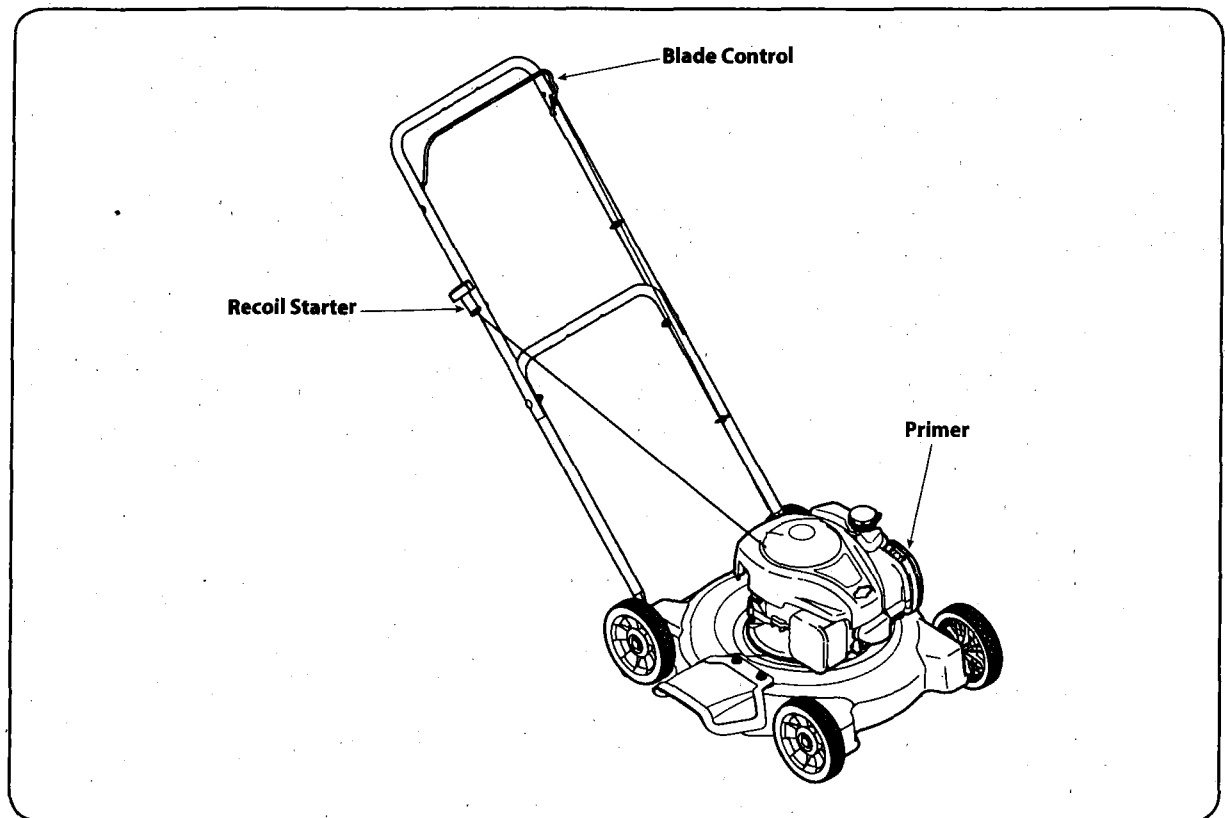


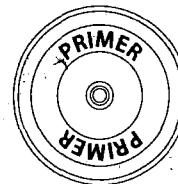
Figure 4-1

Blade Control

The blade control is attached to the upper handle of the mower. Depress and squeeze it against the upper handle to operate the unit. Release it to stop engine and blade.



WARNING: This blade control is a safety device. Never attempt to bypass its operations.



Primer

The primer is located on the left side of the engine. The primer is used to pump gas into the carburetor and aid in starting the engine.

Recoil Starter

The recoil starter is attached to the right upper handle. Stand behind the unit and pull the recoil starter rope to start the unit.

Starting Engine



WARNING: Be sure no one other than the operator is standing near the lawn mower while starting engine or operating mower. Never run engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas. Keep hands, feet, hair and loose clothing away from any moving parts on engine and lawn mower.

Follow the set of instructions pertaining to your unit. Refer to engine manual for help with the engine.

Briggs & Stratton

1. Push the primer three times. See Figure 5-1. Do not prime to restart a warm engine.

NOTE: If you push the primer too many times, excessive fuel will flood the engine and it will be difficult to start.

2. Standing behind the mower, squeeze the blade control against upper handle.
3. Holding these two handles together firmly, grasp recoil starter handle and pull rope out with a rapid, continuous, full arm stroke. See Figure 5-1. Keeping a firm grip on the starter handle, let the rope rewind slowly. Repeat until engine cranks. Let the rope rewind each time slowly.

MTD

1. Push primer 3 times. Wait about two seconds between each push. See Figure 5-2. In temperature below 50°F, prime 5 times. After the engine is warmed up, one prime may be needed for all temperatures.
2. Standing behind the mower, squeeze and hold the blade control against upper handle.
3. Pull the recoil starter lightly until resistance is felt, then pull rapidly to overcome compression, prevent kickback, and start the engine. Repeat if necessary. See Figure 5-2.

IMPORTANT: Do not allow the recoil starter to snap back against the rope guide.

If engine does not start, it may be necessary to re-prime the engine.

Stopping Engine

1. Release blade control to stop the engine and blade.



WARNING: Wait for the blade to stop completely before performing any work on the mower or to remove the mulching baffle (if equipped).

Using Your Lawn Mower

Be sure lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.

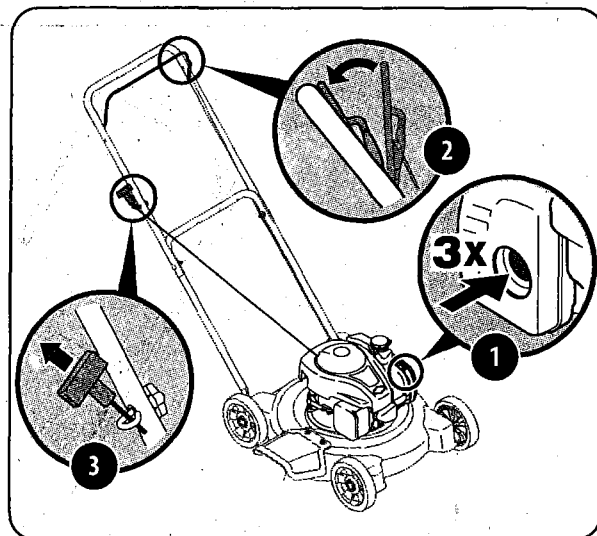


Figure 5-1

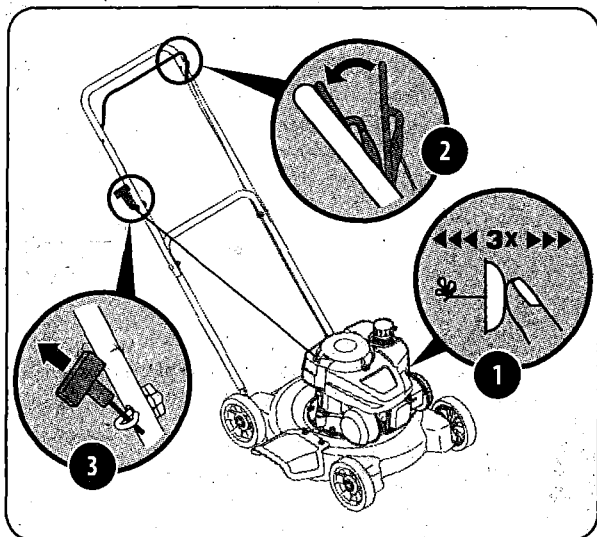


Figure 5-2



WARNING: The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear safety glasses while operating the mower, or while performing any adjustments or repairs on it.



WARNING: If you strike a foreign object, stop the engine. Remove wire from the spark plug, thoroughly inspect mower for any damage, and repair damage before restarting and operating. Extensive vibration of mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

Maintenance & Adjustments

6

Maintenance

General Recommendations

- Always observe safety rules when performing any maintenance.
 - The warranty on this lawn mower does not cover items that have been subjected to operator abuse or negligence. To receive full value from warranty, operator must maintain the lawn mower as instructed here.
 - Changing of engine-governed speed will void engine warranty.
 - All adjustments should be checked at least once each season.
- Periodically check all fasteners and make sure these are tight.



WARNING: Always stop engine, allow engine to cool, disconnect spark plug, and ground against engine before performing any type of maintenance on your machine.

Lubrication

1. Lubricate pivot points on the blade control at least once a season with light oil. This control must operate freely in both directions. See Figure 6-1.

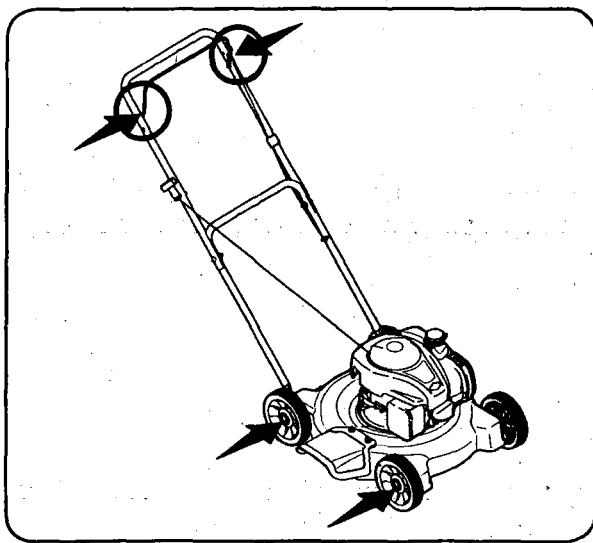


Figure 6-1

2. Lubricate the wheels at least once a season with light oil (or motor oil). If wheels are removed for any reason, lubricate surface of the axle bolt and inner surface of the wheel with light oil. See Figure 6-1.
3. Follow the accompanying engine manual for lubrication schedule and instruction for engine lubrication.

Deck Care

Clean underside of the mower deck after each use to prevent build-up of grass clippings or other debris. Follow steps below for this job.

1. Disconnect spark plug wire. Drain gasoline from lawn mower or place a piece of plastic under the gas cap.
2. Tip mower so that it rests on the housing. Keep the side with the air cleaner facing up. Hold mower firmly.



WARNING: Never tip the mower more than 90° in any direction and do not leave the mower tipped for any length of time. Oil can drain into the upper part of the engine causing a starting problem.

3. Scrape and clean the underside of the deck with a suitable tool. Do not spray with water.

IMPORTANT: Do not use a pressure washer or garden hose to clean your unit. These may cause damage to the engine. The use of water will result in shortened life and reduce serviceability.

4. Put the mower back on its wheels on the ground. If you had put plastic under the gas cap earlier, make sure to remove it now.

Engine Care

A list of key engine maintenance jobs required for good performance by the mower is given below. Follow the accompanying engine manual for a detailed list and instructions.

- Maintain oil level as instructed in engine manual.
- Service air cleaner every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the engine manual.
- Clean spark plug and reset the gap once a season. Spark plug replacement is recommended at the start of each mowing season. Check engine manual for correct plug type and gap specifications.
- Clean engine regularly with a cloth or brush. Keep the top of the engine clean to permit proper air circulation. Remove all grass, dirt, and combustible debris from muffler area.
- Engines stored between 30 and 90 days need to be treated with a gasoline stabilizer such as **STA-BIL®** to prevent deterioration and gum from forming in fuel system or on essential carburetor parts.

Blade Care



WARNING: When removing the cutting blade for sharpening or replacement, protect your hands with a pair of heavy gloves or use a heavy rag to hold the blade.

Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary. Follow the steps below for blade service.

1. Disconnect spark plug boot from spark plug. Turn mower on its side making sure that the air filter and the carburetor are facing up.
2. Remove the bolt and the blade bell support which hold the blade and the blade adapter to the engine crankshaft. See Figure 7-1.

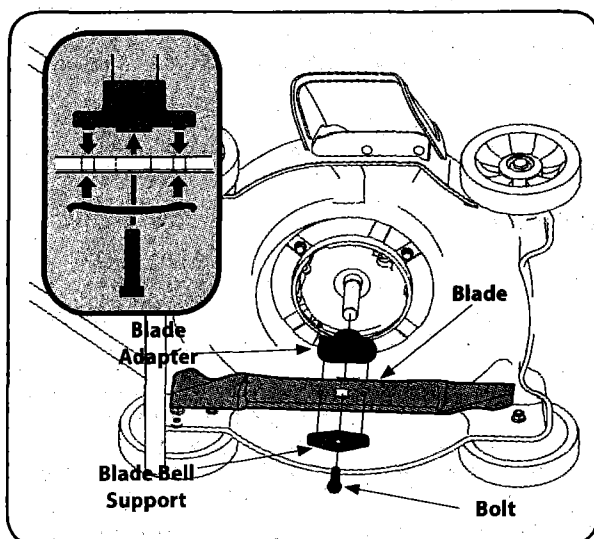


Figure 7-1

3. Remove blade and adapter from the crankshaft. See Figure 7-1.
4. Remove blade from the adapter for testing balance. Balance the blade on a round shaft screwdriver to check. Remove metal from the heavy side until it balances evenly. When sharpening the blade, follow the original angle of grind. Grind each cutting edge equally to keep the blade balanced.



WARNING: An unbalanced blade will cause excessive vibration when rotating at high speeds. It may cause damage to mower and could break causing personal injury.

5. Lubricate the engine crankshaft and the inner surface of the blade adapter with light oil. Slide the blade adapter onto the engine crankshaft. Place the blade on the adapter such that the side of the blade marked "Bottom" (or with part number) faces the ground when the mower is in the operating position. Make sure that the blade is aligned and seated on the blade adapter flanges.
6. Place blade bell support on the blade. Align notches on the blade bell support with small holes in blade.
7. Replace hex bolt and tighten hex bolt to torque: 450 in. lbs. min., 600 in. lbs. max.

To ensure safe operation of your mower, periodically check the blade bolt for correct torque.

Off-Season Storage

The following steps should be taken to prepare your lawn mower for storage.

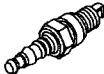
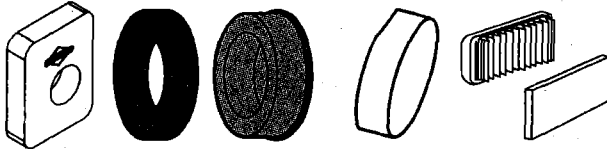


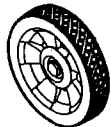

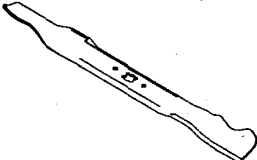
- Clean and lubricate mower thoroughly as described in the lubrication instructions.
- Do not use a pressure washer or garden hose to clean your unit.
- Coat mower's cutting blade with chassis grease to prevent rusting.
- Refer to engine manual for correct engine storage instructions.
- Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

When storing any type of power equipment in a poorly ventilated or metal storage shed, care should be taken to rust-proof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts of your lawn mower before storage.

Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> 1. Blade control disengaged. 2. Spark plug boot disconnected. 3. Fuel tank empty or stale fuel. 4. Engine not primed (if equipped with primer). 5. Faulty spark plug. 6. Blocked fuel line. 7. Engine flooded. 8. Fuel valve (if equipped) closed. 9. Engine not choked (if equipped with choke). 	<ol style="list-style-type: none"> 1. Engage blade control. 2. Connect wire to spark boot. 3. Fill tank with clean, fresh gasoline. 4. Prime engine as instructed in the Operation section. 5. Clean, adjust gap, or replace. 6. Clean fuel line. 7. Wait a few minutes to restart, but do not prime. 8. Open fuel valve. See engine manual. 9. Choke engine. See engine manual.
Engine runs erratic	<ol style="list-style-type: none"> 1. Spark plug boot loose. 2. Blocked fuel line or stale fuel. 3. Vent in gas cap plugged. 4. Water or dirt in fuel system. 5. Dirty air cleaner. 6. Unit running with CHOKE (if equipped) applied. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug boot. 2. Clean fuel line; fill tank with clean, fresh gasoline. 3. Clear vent. 4. Drain fuel tank. Refill with fresh fuel. 5. Refer to engine manual. 6. Push CHOKE knob in.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low. 2. Airflow restricted. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Clean area around and on top of engine.
Occasional skips (hesitates) at high speed	<ol style="list-style-type: none"> 1. Spark plug gap too close. 	<ol style="list-style-type: none"> 1. Adjust gap. Refer to engine manual.
Idles poorly	<ol style="list-style-type: none"> 1. Spark plug fouled, faulty, or gap too wide. 2. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Reset gap or replace spark plug. Refer to engine manual. 2. Refer to engine manual.
Excessive Vibration	<ol style="list-style-type: none"> 1. Cutting blade loose or unbalanced. 2. Bent cutting blade. 	<ol style="list-style-type: none"> 1. Tighten blade and adapter. Balance blade. 2. See an authorized service dealer.
Mower will not mulch grass	<ol style="list-style-type: none"> 1. Wet grass. 2. Excessively high grass. 3. Dull blade. 	<ol style="list-style-type: none"> 1. Do not mow when grass is wet; wait until later to cut. 2. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting path. 3. Sharpen or replace blade.
Uneven cut	<ol style="list-style-type: none"> 1. Wheels not positioned correctly. 2. Dull blade. 	<ol style="list-style-type: none"> 1. Place all four wheels in same height position (if equipped with individual height adjusters). 2. Sharpen or replace blade.

Replacement Parts

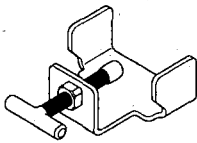
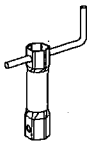
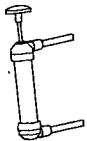
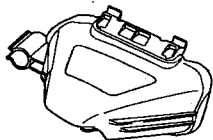
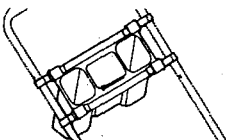

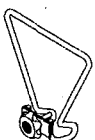
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Component	Part Number and Description	
	759-3336	Spark Plug (Briggs & Stratton)
	951-14437	Spark Plug (MTD - 140cc)
	951-10292	Spark Plug (MTD - 139cc)
	85-799579	Air Filter Cartridge (Briggs & Stratton)
	951-14627	Air Cleaner (MTD - 140cc Foam)
	951-14628	Air Cleaner (MTD - 140cc Paper)
	951-10732	Air Cleaner (MTD - 139cc Oval)
	951-10298	Air Cleaner Kit (MTD - 139cc Square)
	85-799585	Fuel Tank Cap (Briggs & Stratton)
	951-14694	Fuel Cap Assembly (MTD - 140cc)
	951-12738	Fuel Cap Assembly (MTD - 140cc)
	951-10358A	Fuel Filter (MTD)
	734-04063B	Wheel
	731-0064	Discharge Chute
	942-0640	Mulching Blade

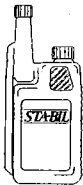
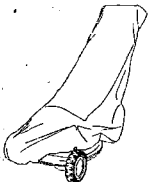
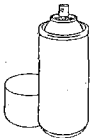
Phone (800) 800-7310 or (330) 220-4683 to order replacement parts or a complete Parts Manual (have your full model number and serial number ready). Parts Manual downloads are also available free of charge at www.mtdproducts.com.

Attachments & Accessories

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Component	Model Number and Description
	490-850-0005 Blade Removal Tool — Holds blade in place for faster, safer removal.
	SPW-134 Spark Plug Wrench — Dual ended wrench to serve multiple uses. Fits 3/4" or 13/16" hex plug.
	490-850-0008 Oil Siphon — Makes it easy to transfer gas, oil and liquids from tank to container.
	490-850-0016 Side Discharge Blower — Blows leaves, grass clippings and debris. Eliminates need for separate blower. Easy installation with no tools.
	490-850-0015 Cargo Carrier — Conveniently holds drinks, tools and more. Simple installation. Attaches in less than two minutes with no tools.
	490-241-0034 Garage Floor Mat — Anti-skid mat, measures 24" x 36". Protects garage floor from stains.
	490-850-0012 Mower Kick Stand — Keeps mower stable for changing/ sharpening blade and cleaning underside of deck.

Phone (800) 800-7310 or (330) 220-4683 to order attachments and accessories. Have your mower's full model number and serial number ready to assure compatibility. Items can also be purchased online at www.mtdproducts.com.

Component	Model Number and Description
	<p>22216 STA-BIL® fuel Stabilizer, 32 oz — Treats 80 gallons of fuel. Keeps stored fuel fresh for quick, easy starts. Prevents corrosion from moisture and ethanol-induced attraction. Prevents gum and varnish.</p>
	<p>490-290-0012 Mower Cover — Protects your mower against sun, rain and dust damage. Coated for maximum water resistance and repellency. U.V. and mildew resistant</p>
	<p>490-900-0062 Non-Stick Mower Deck Spray — Long-Lasting anti-stick graphite spray. Prevents grass clippings buildup in mowing deck.</p>

Phone (800) 800-7310 or (330) 220-4683 to order attachments and accessories. Have your mower's full model number and serial number ready to assure compatibility. Items can also be purchased online at www.intdproducts.com.

MANUFACTURER'S LIMITED WARRANTY FOR



The limited warranty set forth below is given by MTD LLC with respect to new merchandise purchased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "MTD").

This warranty is in addition to any applicable emissions warranty provided with your product.

"MTD" warrants this product (excluding its *Normal Wear Parts* and *Attachments* as described below) against defects in material and workmanship for a period of one (1) year commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any part, accessory or attachment not approved by MTD for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal Wear Parts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. Normal wear parts include, but are not limited to items such as: batteries, belts, blades, blade adapters, tines, grass bags, wheels, rider deck wheels, seats, snow thrower skid shoes, friction wheels, shave plates, auger spiral rubber and tires.

Attachments — MTD warrants attachments for this product against defects in material and workmanship for a period of one (1) year, commencing on the date of the attachment's original purchase or lease. Attachments include, but are not limited to items such as: grass collectors and mulch kits.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area:

In the U.S.A.

Check your Yellow Pages, or contact MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-800-7310, 1-330-220-4683 or log on to our Web site at www.mtdproducts.com:

In Canada

Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

This limited warranty does **not** provide coverage in the following cases:

- a. The engine or component parts thereof. These items may carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.

- b. Log splitter pumps, valves, and cylinders have a separate one-year warranty.
- c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.
- d. Service completed by someone other than an authorized service dealer.
- e. MTD does not extend any warranty for products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through MTD's authorized channels of export distribution.
- f. Replacement parts that are not genuine MTD parts.
- g. Transportation charges and service calls.
- h. MTD does not warrant this product for commercial use.

No implied warranty, including any implied warranty of merchantability or fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind MTD. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. MTD shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-800-800-7310, 1-330-220-4683
MTD Canada Limited - KITCHENER, ON N2G 4J1; Phone 1-800-668-1238



(en) **Operator's Manual**
(es) **Manual del Operario**
(fr) **Manuel de l'opérateur**

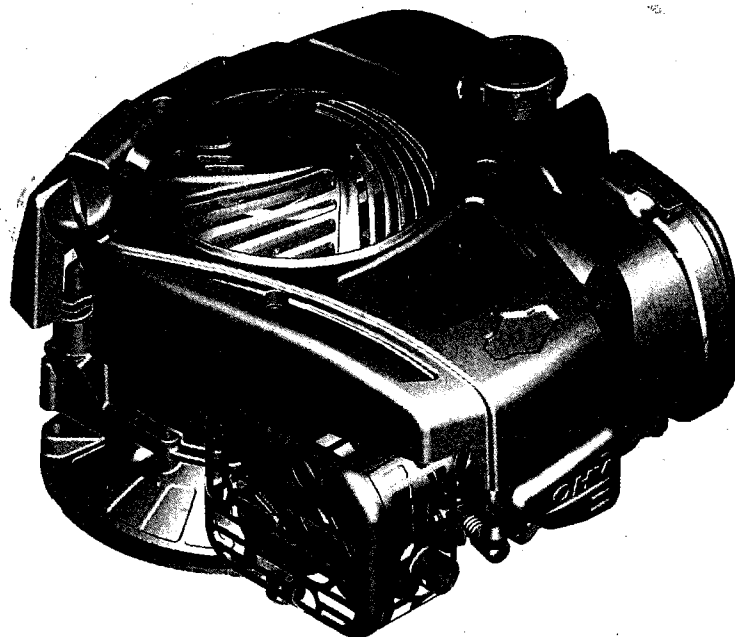


Model 80000

E Series™ 300e Series™
450e Series™

Model 90000

E Series™ 500e Series™
EX Series™ 550e Series™
550ex Series™
575ex Series™
600e Series™
625ex Series™



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Form No. 381266TRI
Revision: G

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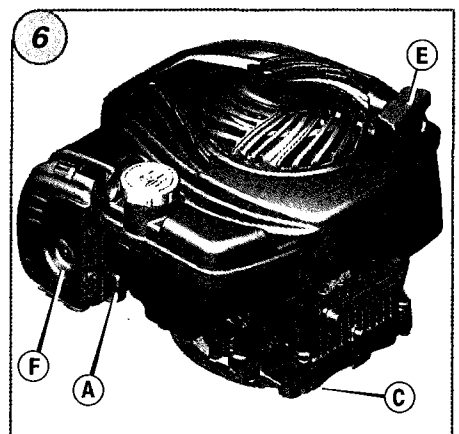
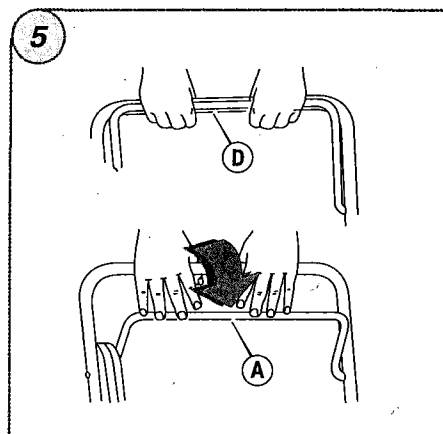
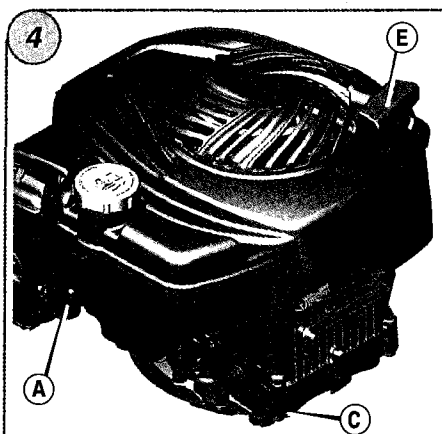
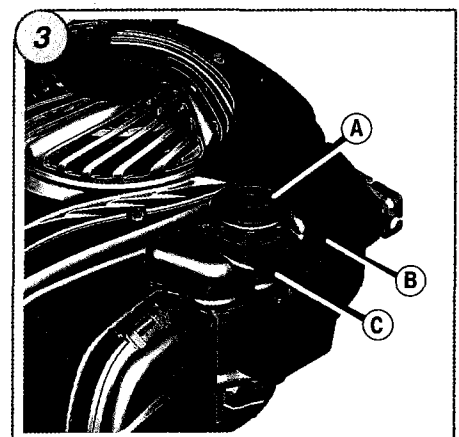
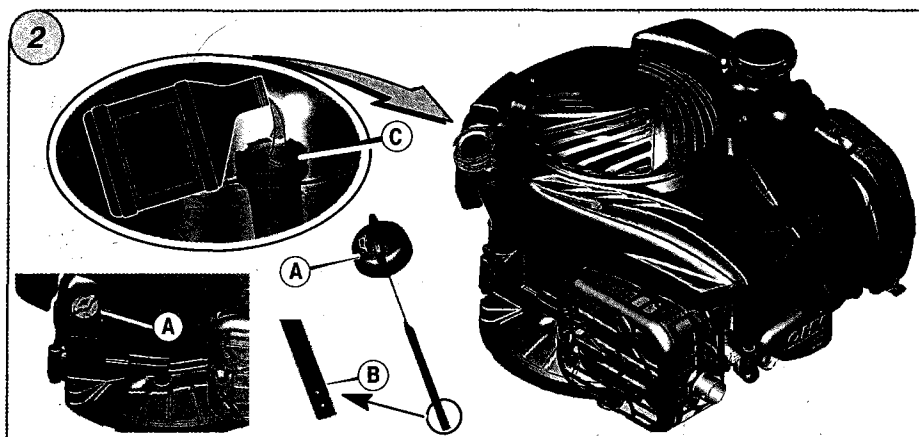
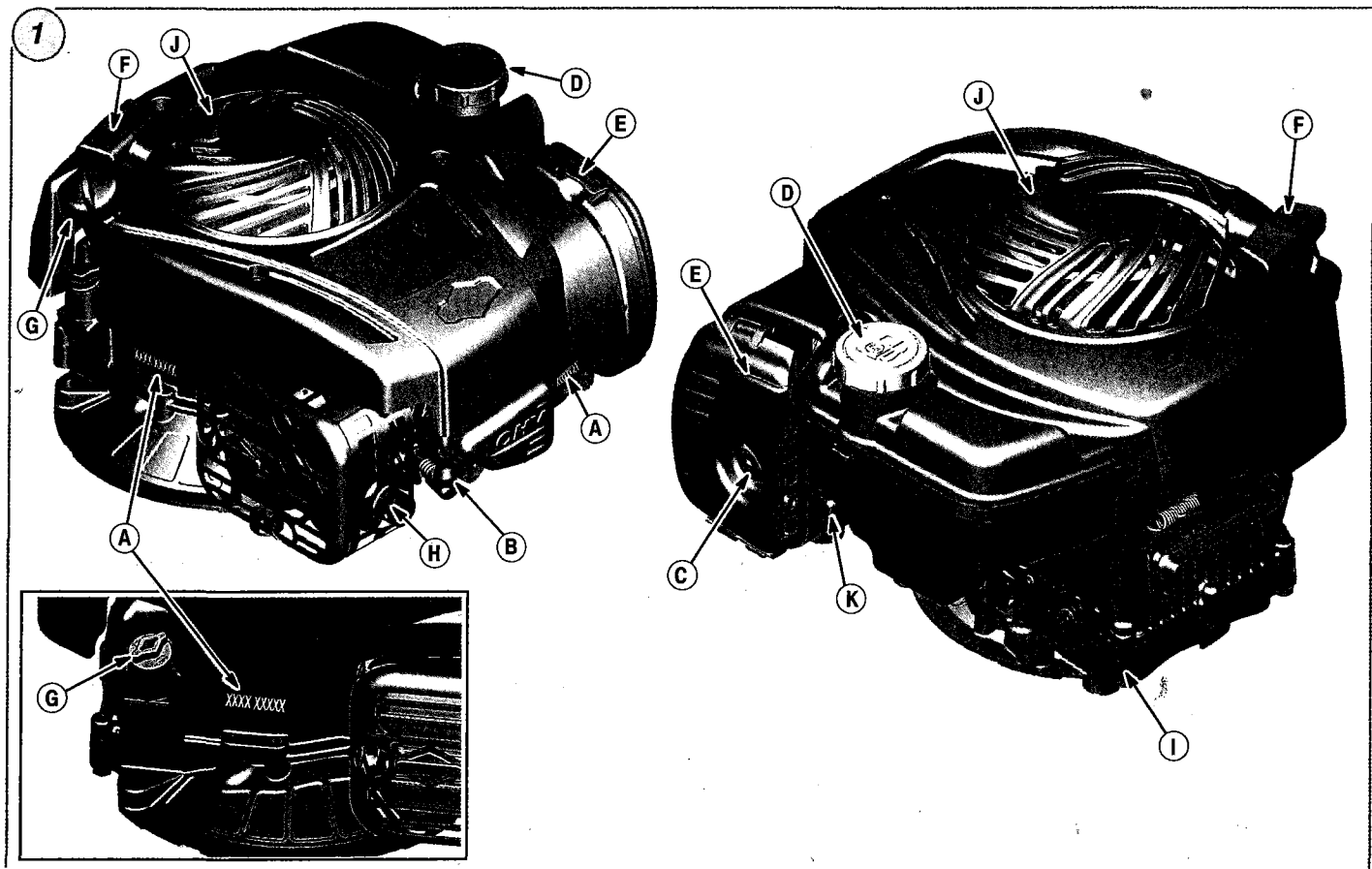
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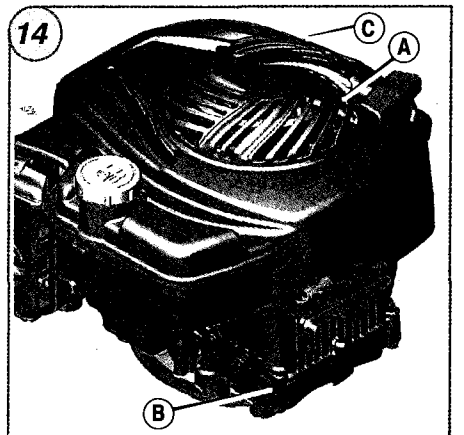
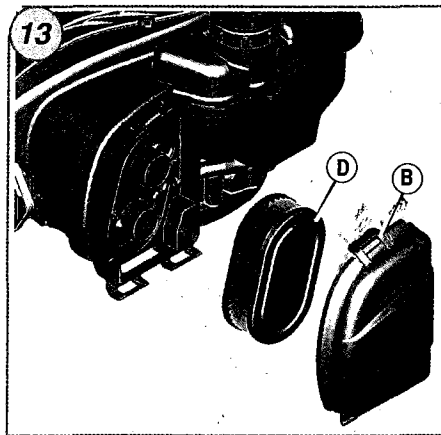
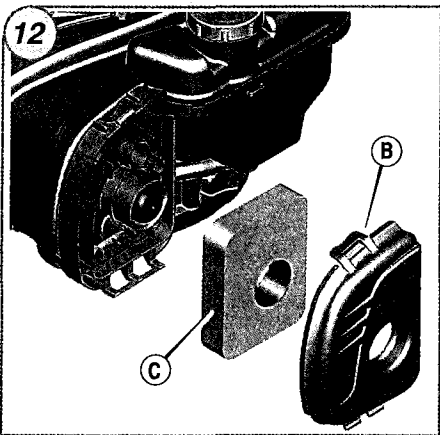
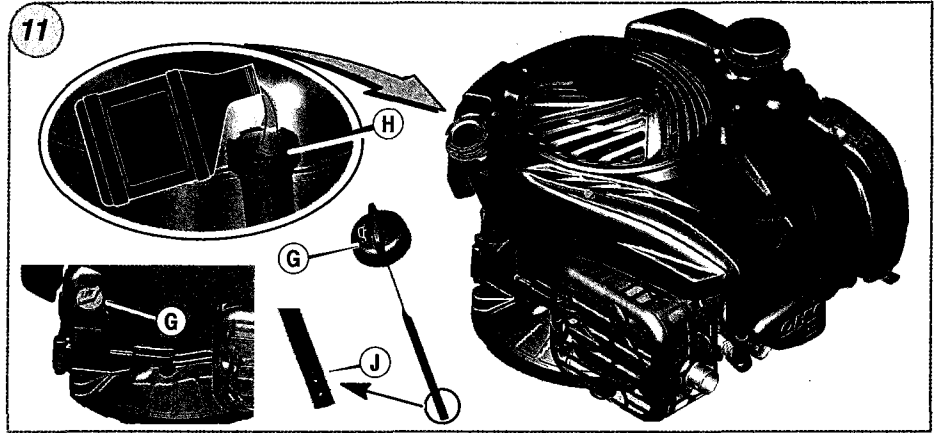
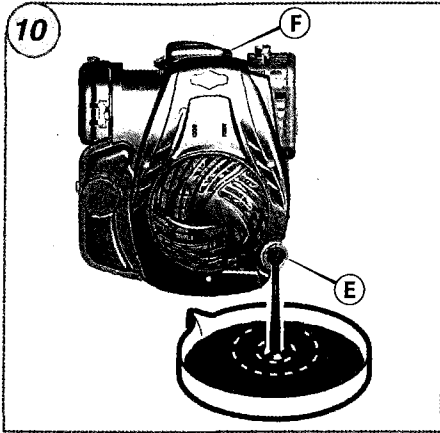
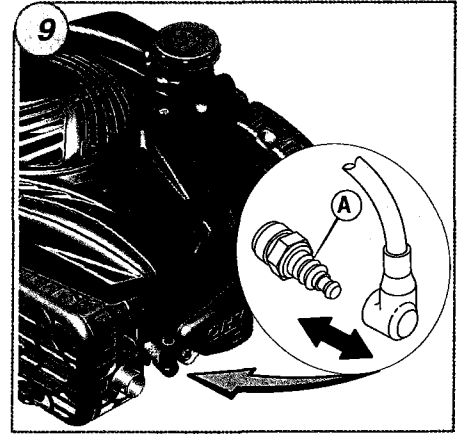
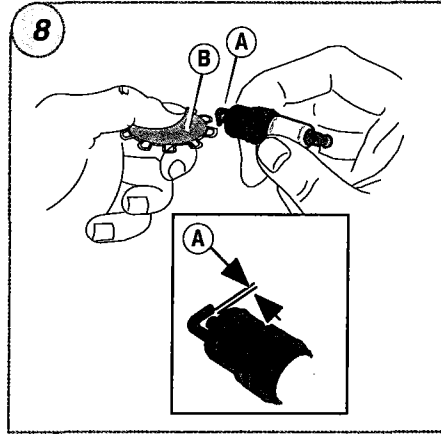
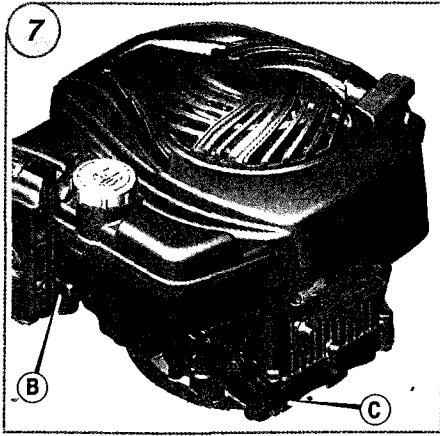
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General Information

This manual contains safety information to make you aware of the hazards and risks associated with engines and how to avoid them. It also contains instructions for the proper use and care of the engine. Because Briggs & Stratton Corporation does not necessarily know what equipment this engine will power, it is important that you read and understand these instructions and the instructions for the equipment. **Save these original instructions for future reference.**

For replacement parts or technical assistance, record below the engine model, type, and code numbers along with the date of purchase. These numbers are located on your engine (see the **Features and Controls** page).

Date of purchase: _____
MM/DD/YYYY

Engine model: _____
Model: Type: Code:

Look for the 2D barcode located on some engines. When viewed with a 2D-capable device, the code will bring up our website where you can access support information for this product. Data rates apply. Some countries may not have online support information available.





Power Ratings: The gross power rating for individual gasoline engine models is labeled in accordance with SAE (Society of Automotive Engineers) code J1940 Small Engine Power & Torque Rating Procedure, and is rated in accordance with SAE J1995. Torque values are derived at 2600 RPM for those engines with "rpm" called out on the label and 3060 RPM for all others; horsepower values are derived at 3600 RPM. The gross power curves can be viewed at www.BRIGGSandSTRATTON.COM. Net power values are taken with exhaust and air cleaner installed whereas gross power values are collected without these attachments. Actual gross engine power will be higher than net engine power and is affected by, among other things, ambient operating conditions and engine-to-engine variability. Given the wide array of products on which engines are placed, the gasoline engine may not develop the rated gross power when used in a given piece of power equipment. This difference is due to a variety of factors including, but not limited to, the variety of engine components (air cleaner, exhaust, charging, cooling, carburetor, fuel pump, etc.), application limitations, ambient operating conditions (temperature, humidity, altitude), and engine-to-engine variability. Due to manufacturing and capacity limitations, Briggs & Stratton may substitute an engine of higher rated power for this engine.


Operator Safety


SAFETY AND CONTROL SYMBOLS



The safety alert symbol  is used to identify safety information about hazards that can result in personal injury. A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

 **DANGER** indicates a hazard which, if not avoided, will result in death or serious injury.

 **WARNING** indicates a hazard which, if not avoided, could result in death or serious injury.

 **CAUTION** indicates a hazard which, if not avoided, could result in minor or moderate injury.

NOTICE indicates a situation that could result in damage to the product.



WARNING

Certain components in this product and its related accessories contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



WARNING

Briggs & Stratton Engines are not designed for and are not to be used to power: fun-karts; go-karts; children's, recreational, or sport all-terrain vehicles (ATVs); motorbikes; hovercraft; aircraft products; or vehicles used in competitive events not sanctioned by Briggs & Stratton. For information about competitive racing products, see www.briggsracing.com. For use with utility and side-by-side ATVs, please contact Briggs & Stratton Engine Application Center, 1-866-927-3349. Improper engine application may result in serious injury or death.

NOTICE: This engine was shipped from Briggs & Stratton without oil. Before you start the engine, make sure you add oil according to the instructions in this manual. If you start the engine without oil, it will be damaged beyond repair and will not be covered under warranty.



WARNING



Fuel and its vapors are extremely flammable and explosive.
Fire or explosion can cause severe burns or death.

When Adding Fuel

- Turn engine off and let engine cool at least 2 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary
- If fuel spills, wait until it evaporates before starting engine.

When Starting Engine

- Ensure that spark plug, muffler, fuel cap and air cleaner (if equipped) are in place and secured.
- Do not crank engine with spark plug removed.
- If engine floods, set choke (if equipped) to OPEN/RUN position, move throttle (if equipped) to FAST position and crank until engine starts.

When Operating Equipment

- Do not tip engine or equipment at angle which causes fuel to spill.
- Do not choke the carburetor to stop engine.
- Never start or run the engine with the air cleaner assembly (if equipped) or the air filter (if equipped) removed.

When Changing Oil

- When you drain the oil from the top oil fill tube, the fuel tank must be empty or fuel can leak out and result in a fire or explosion.

When Tipping Unit for Maintenance

- When performing maintenance that requires the unit to be tipped, the fuel tank must be empty or fuel can leak out and result in a fire or explosion.

When Transporting Equipment

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

When Storing Fuel Or Equipment With Fuel In Tank

- Store away from furnaces, stoves, water heaters or other appliances that have pilot lights or other ignition sources because they can ignite fuel vapors.



WARNING



Starting engine creates sparking.
Sparking can ignite nearby flammable gases.
Explosion and fire could result.

- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fluids because vapors are flammable.



WARNING



POISONOUS GAS HAZARD. Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You CANNOT see it, smell it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

- Operate this product ONLY outside far away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot detect carbon monoxide gas.
- DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.
- ALWAYS place this product downwind and point the engine exhaust away from occupied spaces.



WARNING



Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.

Broken bones, fractures, bruises or sprains could result.

- When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.
- Remove all external equipment/engine loads before starting engine.
- Direct-coupled equipment components such as, but not limited to, blades, impellers, pulleys, sprockets, etc., must be securely attached.



WARNING



Rotating parts can contact or entangle hands, feet, hair, clothing, or accessories.

Traumatic amputation or severe laceration can result.

- Operate equipment with guards in place.
- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Do not wear loose-fitting clothing, dangling drawstrings or items that could become caught.



WARNING



Running engines produce heat. Engine parts, especially muffler, become extremely hot.

Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated debris from muffler area and cylinder area.
- It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws. Contact the original equipment manufacturer, retailer, or dealer to obtain a spark arrester designed for the exhaust system installed on this engine.



WARNING



Unintentional sparking can result in fire or electric shock.

Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

Fire hazard




Before performing adjustments or repairs:

- Disconnect the spark plug wire and keep it away from the spark plug.
- Disconnect battery at negative terminal (only engines with electric start.)
- Use only correct tools.
- Do not tamper with governor spring, links or other parts to increase engine speed.
- Replacement parts must be of the same design and installed in the same position as the original parts. Other parts may not perform as well, may damage the unit, and may result in injury.
- Do not strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.

When testing for spark:

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

Features and Controls

Compare the illustration  with your engine to familiarize yourself with the location of various features and controls.

- A. Engine Identification
Model Type Code
- B. Spark Plug
- C. Primer (optional)
- D. Fuel Tank and Cap
- E. Air Cleaner
- F. Starter Cord Handle
- G. Dipstick
- H. Muffler
Muffler Guard (optional)
Spark Arrester (optional)
- I. Throttle Control (optional)
- J. Finger Guard
- K. Stop Switch (optional)

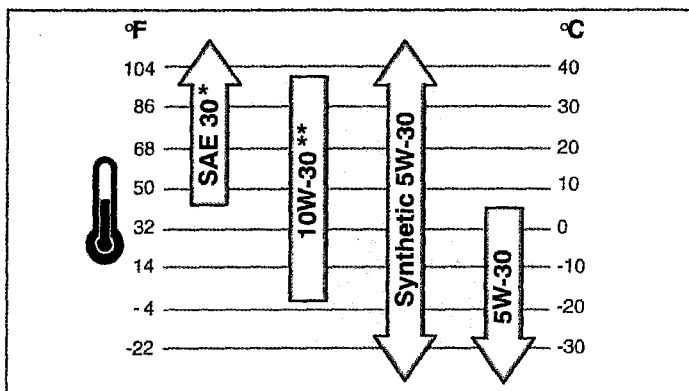
Operation

Oil capacity (see the *Specifications* section)

Oil Recommendations

We recommend the use of Briggs & Stratton Warranty Certified oils for best performance. Other high-quality detergent oils are acceptable if classified for service SF, SG, SH, SJ or higher. Do not use special additives.

Outdoor temperatures determine the proper oil viscosity for the engine. Use the chart to select the best viscosity for the outdoor temperature range expected.



* Below 40°F (4°C) the use of SAE 30 will result in hard starting.

** Above 80°F (27°C) the use of 10W-30 may cause increased oil consumption. Check oil level more frequently.

How To Check/Add Oil - Figure

Before adding or checking the oil

- Place engine level.
 - Clean the oil fill area of any debris.
1. Remove the dipstick (A) and wipe with a clean cloth (Figure 2).
 2. Insert and tighten the dipstick.
 3. Remove the dipstick and check the oil level. It should be at the top of the full indicator (B) on the dipstick.
 4. If low, add oil slowly into the engine oil fill (C). **Do not overfill.** After adding oil, wait one minute and then recheck the oil level.
 5. Replace and tighten the dipstick.

Low Oil Protection System (if equipped)

Some engines are equipped with a low oil sensor. If the oil is low, the sensor will either activate a warning light or stop the engine. Stop the engine and follow these steps before restarting the engine.

- Make sure the engine is level.
- Check the oil level. See the *How To Check/Add Oil* section.
- If the oil level is low, add the proper amount of oil. Start the engine and make sure the warning light (if equipped) is not activated.
- If the oil level is not low, **do not start** the engine. Contact an Authorized Briggs & Stratton Dealer to have the oil problem corrected.

Fuel Recommendations

Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline.
- A minimum of 87 octane/87 AKI (91 RON). High altitude use, see below.
- Gasoline with up to 10% ethanol (gasohol) is acceptable.

CAUTION: Do not use unapproved gasolines, such as E15 and E85. Do not mix oil in gasoline or modify the engine to run on alternate fuels. Use of unapproved fuels will cause damage to engine components, which will not be covered under warranty.

To protect the fuel system from gum formation, mix a fuel stabilizer into the fuel. See **Storage**. All fuel is not the same. If starting or performance problems occur, change fuel providers or change brands. This engine is certified to operate on gasoline. The emissions control system for this engine is EM (Engine Modifications).

High Altitude

At altitudes over 5,000 feet (1524 meters), a minimum 85 octane/85 AKI (89 RON) gasoline is acceptable. To remain emissions compliant, high altitude adjustment is required. Operation without this adjustment will cause decreased performance, increased fuel consumption, and increased emissions. See an authorized Briggs & Stratton Dealer for high altitude adjustment information.

Operation of the engine at altitudes below 2,500 feet (762 meters) with high altitude adjustment is not recommended.

How To Add Fuel - Figure



WARNING



Fuel and its vapors are extremely flammable and explosive.
Fire or explosion can cause severe burns or death.

When Adding Fuel

- Turn engine off and let engine cool at least 2 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- If fuel spills, wait until it evaporates before starting engine.

1. Clean the fuel cap area of dirt and debris. Remove the fuel cap (A, Figure 3).
2. Fill the fuel tank (B) with fuel. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck (C).
3. Reinstall the fuel cap.

How To Start The Engine



WARNING



Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.

Broken bones, fractures, bruises or sprains could result.

- When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.



WARNING



Fuel and its vapors are extremely flammable and explosive.
Fire or explosion can cause severe burns or death.

When Starting Engine

- Ensure that spark plug, muffler, fuel cap and air cleaner (if equipped) are in place and secured.
- Do not crank engine with spark plug removed.
- If engine floods, set choke (if equipped) to OPEN/RUN position, move throttle (if equipped) to FAST position and crank until engine starts.



WARNING

POISONOUS GAS HAZARD. Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You CANNOT see it, smell it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas. If you start to feel sick, dizzy, or weak while using this product, shut it off and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

- Operate this product ONLY outside far away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.
- Install battery-operated carbon monoxide alarms or plug-in carbon monoxide alarms with battery back-up according to the manufacturer's instructions. Smoke alarms cannot detect carbon monoxide gas.
- DO NOT run this product inside homes, garages, basements, crawlspaces, sheds, or other partially-enclosed spaces even if using fans or opening doors and windows for ventilation. Carbon monoxide can quickly build up in these spaces and can linger for hours, even after this product has shut off.
- ALWAYS place this product downwind and point the engine exhaust away from occupied spaces.

NOTICE: This engine was shipped from Briggs & Stratton without oil. Before you start the engine, make sure you add oil according to the instructions in this manual. If you start the engine without oil, it will be damaged beyond repair and will not be covered under warranty.

Determine The Starting System



Before starting the engine, you must determine the type of starting system that is on your engine. Your engine will have one of the following types.

- **ReadyStart® System:** This features a temperature controlled automatic choke. It does not have a manual choke or a primer.
- **Primer System:** This features a red primer to be used for starting in cool temperatures. It does not have a manual choke.

To start your engine, follow the instructions for your type of starting system.

Note: Equipment may have remote controls. See the equipment manual for location and operation of remote controls.

ReadyStart® System - Figure 4 5

1. Check the oil level. See the **How To Check/Add Oil** section.
2. Make sure equipment drive controls, if equipped, are disengaged.
3. Push the stop switch (A, Figure 4), if equipped, to the on position.
4. Move the throttle control (C, Figure 4), if equipped, to the fast  position.
Operate the engine in the fast  position.
5. If the product is equipped with an engine stop lever (D), hold the engine stop lever against the handle (Figure 5).



6. Firmly hold the starter cord handle (E). Pull the starter cord handle slowly until resistance is felt, then pull rapidly (Figure 4).

Note: If the engine does not start after repeated attempts, go to BRIGGSandSTRATTON.COM or call 1-800-233-3723 (in USA).



WARNING: Rapid retraction of the starter cord (kickback) will pull your hand and arm toward the engine faster than you can let go. Broken bones, fractures, bruises or sprains could result. When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.

Primer System - Figure 5 6

1. Check the oil level. See the **How To Check/Add Oil** section.
2. Make sure equipment drive controls, if equipped, are disengaged.
3. Push the stop switch (A, Figure 6), if equipped, to the on position.
4. Move the throttle control (C, Figure 6), if equipped, to the fast  position.
Operate the engine in the fast  position.
5. Push the red primer (F) three times.
Note: Priming is usually unnecessary when restarting a warm engine.
Note: If you push the primer too many times, excessive fuel will flood the carburetor and the engine will be difficult to start.
6. If the product is equipped with an engine stop lever (D), hold the engine stop lever against the handle (Figure 5).
7. Firmly hold the starter cord handle (E). Pull the starter cord handle slowly until resistance is felt, then pull rapidly (Figure 6).
Note: If the engine does not start after repeated attempts, repeat Steps 5, 6, and 7. If it still does not start, go to BRIGGSandSTRATTON.COM or call 1-800-233-3723 (in USA).




WARNING: Rapid retraction of the starter cord (kickback) will pull your hand and arm toward the engine faster than you can let go. Broken bones, fractures, bruises or sprains could result. When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.

How To Stop The Engine - Figure 5 7

Release the engine stop lever (A, Figure 5)

Engine with Stop Switch: Push the stop switch (B, Figure 7) to the off position
or

Engine with Throttle Control: Move the throttle control (C, Figure 7) to the stop  position.

Maintenance

NOTICE: If the engine is tipped during maintenance, the fuel tank must be empty and the spark plug side must be up. If the fuel tank is not empty and if the engine is tipped in any other direction, it may be difficult to start due to oil or gasoline contaminating the air filter and/or the spark plug.



WARNING: When performing maintenance that requires the unit to be tipped, the fuel tank must be empty or fuel can leak out and result in a fire or explosion.

We recommend that you see any Briggs & Stratton Authorized Dealer for all maintenance and service of the engine and engine parts.

NOTICE: All the components used to build this engine must remain in place for proper operation.

Emissions Control

Maintenance, replacement, or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individual. However, to obtain "no charge" emissions control service, the work must be performed by a factory authorized dealer. See the Emissions Warranty.



WARNING

Unintentional sparking can result in fire or electric shock.
Unintentional start-up can result in entanglement, traumatic amputation, or laceration.
Fire hazard



Before performing adjustments or repairs:

- Disconnect the spark plug wire and keep it away from the spark plug.
- Disconnect battery at negative terminal (only engines with electric start.)
- Use only correct tools.
- Do not tamper with governor spring, links or other parts to increase engine speed.
- Replacement parts must be of the same design and installed in the same position as the original parts. Other parts may not perform as well, may damage the unit, and may result in injury.
- Do not strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.

When testing for spark:

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

Maintenance Chart

First 5 Hours
<ul style="list-style-type: none"> Change oil
Every 8 Hours or Daily
<ul style="list-style-type: none"> Check engine oil level Clean area around muffler and controls Clean finger guard
Every 25 Hours or Annually
<ul style="list-style-type: none"> Clean air filter *
Every 50 Hours or Annually
<ul style="list-style-type: none"> Change engine oil Check muffler and spark arrester
Annually
<ul style="list-style-type: none"> Replace air filter Replace spark plug Clean air cooling system *

* In dusty conditions or when airborne debris is present, clean more often.

Carburetor And Engine Speed Adjustment

Never make adjustments to the carburetor or engine speed. The carburetor was set at the factory to operate efficiently under most conditions. Do not tamper with the governor spring, linkages, or other parts to change the engine speed. If any adjustments are required contact a Briggs & Stratton Authorized Service Center for service.

NOTICE: The equipment manufacturer specifies the maximum speed for the engine as installed on the equipment. **Do not exceed** this speed. If you are unsure what the equipment maximum speed is, or what the engine speed is set to from the factory, contact a Briggs & Stratton Authorized Service Center for assistance. For safe and proper operation of the equipment, the engine speed should be adjusted only by a qualified service technician.

Inspect Muffler And Spark Arrester - Figure ①



WARNING



Running engines produce heat. Engine parts, especially muffler, become extremely hot.



Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated debris from muffler area and cylinder area.
- It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws. Contact the original equipment manufacturer, retailer, or dealer to obtain a spark arrester designed for the exhaust system installed on this engine.

Remove accumulated debris from muffler area and cylinder area. Inspect the muffler (H, Figure 1) for cracks, corrosion, or other damage. Remove the spark arrester, if equipped, and inspect for damage or carbon blockage. If damage is found, install replacement parts before operating.



WARNING: Replacement parts must be of the same design and installed in the same position as the original parts. Other parts may not perform as well, may damage the unit, and may result in injury.

How To Replace The Spark Plug - Figure ⑧

Check the gap (A, Figure 8) with a wire gauge (B). If necessary, reset the gap. Install and tighten the spark plug to the recommended torque. For gap setting or torque, see the **Specifications** section.

Note: In some areas, local law requires using a resistor spark plug to suppress ignition signals. If this engine was originally equipped with a resistor spark plug, use the same type for replacement.

How To Change The Oil - Figure ⑨ ⑩ ⑪



WARNING



Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death.

- When you drain the oil from the top oil fill tube, the fuel tank must be empty or fuel can leak out and result in a fire or explosion.

Used oil is a hazardous waste product and must be disposed of properly. Do not discard with household waste. Check with your local authorities, service center, or dealer for safe disposal/recycling facilities.

Remove Oil

The oil must be drained from the top oil fill tube (E, Figure 10).

- With engine off but still warm, disconnect the spark plug wire (A) and keep it away from the spark plug (Figure 9).
- Remove the dipstick (G, Figure 11).
- When you drain the oil from the top oil fill tube (E), keep the spark plug end of the engine (F) up (Figure 10). Drain the oil into an approved container.



WARNING: When you drain the oil from the top oil fill tube, the fuel tank must be empty or fuel can leak out and result in a fire or explosion. To empty the fuel tank, run the engine until it stops from lack of fuel.

Add Oil

- Place engine level.
 - Clean the oil fill area of any debris.
 - See the **Specifications** section for oil capacity.
- Remove the dipstick (G) and wipe with a clean cloth (Figure 11).
 - Pour the oil slowly into the engine oil fill (H). **Do not overfill.** After adding oil, wait one minute and then check the oil level.
 - Install and tighten the dipstick.
 - Remove the dipstick and check the oil level. It should be at the top of the full indicator (J) on the dipstick.
 - Install and tighten the dipstick.

How To Service The Air Filter - Figure ⑫ ⑬



WARNING



Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death.

- Never start or run the engine with the air cleaner assembly (if equipped) or the air filter (if equipped) removed.

NOTICE: Do not use pressurized air or solvents to clean the filter. Pressurized air can damage the filter and solvents will dissolve the filter.

Two types of air filter systems are shown, a **Standard** and a **High Capacity**. Determine the type installed on your engine and service as follows.

Standard Air Filter - Figure ⑫

The air cleaner system uses a foam element that can be washed and reused.

- Open the cover (B, Figure 12).
- Remove the foam element (C).
- Wash the foam element in liquid detergent and water. Squeeze dry the foam element in a clean cloth.
- Saturate the foam element with clean engine oil. To remove the excess engine oil, squeeze the foam element in a clean cloth.
- Install the foam element (C).
- Close the cover (B).

High Capacity Air Filter - Figure ⑬

The air cleaner system uses a pleated filter.

- Open the cover (B, Figure 13).
- Remove the filter (D).
- To loosen debris, gently tap the filter on a hard surface. If the filter is excessively dirty, replace with a new filter.
- Install the filter (D).
- Close the cover (B).

How To Clean The Air Cooling System - Figure 14



WARNING



Running engines produce heat. Engine parts, especially muffler, become extremely hot.



Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated debris from muffler area and cylinder area.

NOTICE: Do not use water to clean the engine. Water could contaminate the fuel system. Use a brush or dry cloth to clean the engine.

This is an air cooled engine. Dirt or debris can restrict air flow and cause the engine to overheat, resulting in poor performance and reduced engine life.

Use a brush or dry cloth to remove debris from the finger guard (A). Keep linkage, springs and controls (B) clean. Keep the area around and behind the muffler (C) free of any combustible debris (Figure 14).

Storage



WARNING



Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death.



When Storing Fuel Or Equipment With Fuel In Tank

- Store away from furnaces, stoves, water heaters or other appliances that have pilot lights or other ignition sources because they can ignite fuel vapors.

Fuel System

Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system or on essential carburetor parts. To keep fuel fresh, use **Briggs & Stratton Advanced Formula Fuel Treatment & Stabilizer**, available wherever Briggs & Stratton genuine service parts are sold.

For engines equipped with a FRESH START® fuel cap, use **Briggs & Stratton FRESH START®** available in a drip concentrate cartridge.

There is no need to drain gasoline from the engine if a fuel stabilizer is added according to instructions. Run the engine for 2 minutes to circulate the stabilizer throughout the fuel system before storage.

If gasoline in the engine has not been treated with a fuel stabilizer, it must be drained into an approved container. Run the engine until it stops from lack of fuel. The use of a fuel stabilizer in the storage container is recommended to maintain freshness.

Engine Oil

While the engine is still warm, change the engine oil.

NOTICE: Store the engine level (normal operating position). If the engine is tipped for storage, the fuel tank **must be empty** and the spark plug side **must be up**. If the fuel tank is not empty and if the engine is tipped in any other direction, it may be difficult to start due to oil or gasoline contaminating the air filter and/or the spark plug.

Troubleshooting

Need Assistance? Go to **BRIGGSandSTRATTON.COM** or call 1-800-233-3723 (in USA).

Specifications

Engine Specifications

Model	80000
Displacement	7.63 ci (125 cc)
Bore	2.362 in (60 mm)
Stroke	1.750 in (44.45 mm)
Oil Capacity	15 oz (0.44 L)

Engine Specifications

Model	90000
Displacement	8.64 ci (140 cc)
Bore	2.495 in (63.40 mm)
Stroke	1.750 in (44.45 mm)
Oil Capacity	15 oz (0.44 L)

Engine Specifications

Model	093J00
Displacement	9.15 ci (150 cc)
Bore	2.583 in (65.60 mm)
Stroke	1.750 in (44.45 mm)
Oil Capacity	15 oz (0.44 L)

Tune-up Specifications *

Model	80000, 90000, 093J00
Spark Plug Gap	0.020 in (0.51 mm)
Spark Plug Torque	180 lb-in (20 Nm)
Armature Air Gap	0.006 - 0.014 in (0.15 - 0.36 mm)
Intake Valve Clearance	0.004 - 0.008 in (0.10 - 0.20 mm)
Exhaust Valve Clearance	0.004 - 0.008 in (0.10 - 0.20 mm)

* Engine power will decrease 3.5% for each 1,000 feet (300 meters) above sea level and 1% for each 10° F (5.6° C) above 77° F (25° C). The engine will operate satisfactorily at an angle up to 15°. Refer to the equipment operator's manual for safe allowable operating limits on slopes.

Common Service Parts

Service Part	Part Number
Air Filter, Standard	799579
Air Filter, High Capacity	798452
Oil - SAE 30	100113
Fuel Additive	5041, 5058
Resistor Spark Plug	692051
Spark Plug Wrench	19576
Spark Tester	19368

✓ We recommend that you see any Briggs & Stratton Authorized Dealer for all maintenance and service of the engine and engine parts.

LIMITED WARRANTY

Briggs & Stratton warrants that, during the warranty period specified below, it will repair or replace, free of charge, any part that is defective in material or workmanship or both. Transportation charges on product submitted for repair or replacement under this warranty must be borne by purchaser. This warranty is effective for and is subject to the time periods and conditions stated below. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at BRIGGSandSTRATTON.COM. The purchaser must contact the Authorized Service Dealer, and then make the product available to the Authorized Service Dealer for inspection and testing.

There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to the warranty period listed below, or to the extent permitted by law. Liability for incidental or consequential damages are excluded to the extent exclusion is permitted by law. Some states or countries do not allow limitations on how long an implied warranty lasts, and some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state and country to country. **

STANDARD WARRANTY TERMS * ▲

Brand/Product Type	Consumer Use	Commercial Use
Vanguard™ ■	3 years	3 years
Commercial Turf Series™	2 years	2 years
Engines Featuring Dura-Bore™ Cast Iron Sleeve	2 years	1 year
All Other Briggs & Stratton Engines	2 years	90 days

- * These are our standard warranty terms, but occasionally there may be additional warranty coverage that was not determined at time of publication. For a listing of current warranty terms for your engine, go to BRIGGSandSTRATTON.COM or contact your Briggs & Stratton Authorized Service Dealer.
- ** In Australia - Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at BRIGGSandSTRATTON.COM, or by calling 1300 274 447, or by emailing or writing to salesenquiries@briggsandstratton.com.au, Briggs & Stratton Australia Pty Ltd, 1 Moorebank Avenue, Moorebank, NSW, Australia, 2170.
- ▲ There is no warranty for engines on equipment used for prime power in place of a utility or for standby generators used for commercial purposes. Engines used in competitive racing or on commercial or rental tracks are not warranted.
- Vanguard installed on standby generators: 2 years consumer use, no warranty commercial use. Vanguard installed on utility vehicles: 2 years consumer use, 2 years commercial use. Vanguard 3-cylinder liquid cooled: see Briggs & Stratton 3/LC Engine Warranty Policy.

The warranty period begins on the date of purchase by the first retail or commercial consumer. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once an engine has experienced commercial use, it shall thereafter be considered as a commercial use engine for purposes of this warranty.

Save your proof of purchase receipt. If you do not provide proof of the initial purchase date at the time warranty service is requested, the manufacturing date of the product will be used to determine the warranty period. Product registration is not required to obtain warranty service on Briggs & Stratton products.

About Your Warranty

This limited warranty covers engine-related material and/or workmanship issues only, and not replacement or refund of the equipment to which the engine may be mounted. Routine maintenance, tune-ups, adjustments, or normal wear and tear are not covered under this warranty. Similarly, warranty is not applicable if the engine has been altered or modified or if the engine serial number has been defaced or removed. This warranty does not include used, reconditioned, second-hand, or demonstration equipment or engines. This warranty does not cover engine damage or performance problems caused by:

- The use of parts that are not original Briggs & Stratton parts;
- Operating the engine with insufficient, contaminated, or an incorrect grade of lubricating oil;
- The use of contaminated or stale fuel, gasoline formulated with ethanol greater than 10%, or the use of alternative fuels such as liquefied petroleum or natural gas on engines not originally designed/manufactured by Briggs & Stratton to operate on such fuels;
- Dirt which entered the engine because of improper air cleaner maintenance or re-assembly;
- Striking an object with the cutter blade of a rotary lawn mower, loose or improperly installed blade adapters, impellers, or other crankshaft coupled devices, or excessive v-belt tightness;
- Associated parts or assemblies such as clutches, transmissions, equipment controls, etc., which are not supplied by Briggs & Stratton;
- Overheating due to grass clippings, dirt and debris, or rodent nests which plug or clog the cooling fins or flywheel area, or by operating the engine without sufficient ventilation;
- Excessive vibration due to over-speeding, loose engine mounting, loose or unbalanced cutter blades or impellers, or improper coupling of equipment components to the crankshaft;
- Misuse, lack of routine maintenance, shipping, handling, or warehousing of equipment, or improper engine installation.

Warranty service is available only through Briggs & Stratton Authorized Service Dealers. Locate your nearest Authorized Service Dealer in our dealer locator map at BRIGGSandSTRATTON.COM or by calling 1-800-233-3723 (in USA).

California, U.S. EPA, and Briggs & Stratton Corporation Emissions Control Warranty Statement
Your Warranty Rights And Obligations
For Briggs & Stratton Engine Models with "F" Trim Designation
(Model-Type-Trim Representation xxxxx xxxx Fx)

January 2014

The California Air Resources Board, U.S. EPA, and Briggs & Stratton (B&S) are pleased to explain the emissions control system warranty on your Model Year 2014-2015 engine/equipment. In California, new small off-road engines and large spark ignited engines less than or equal to 1.0 liter must be designed, built, and equipped to meet the State's stringent anti-smog standards. B&S must warrant the emissions control system on your engine/equipment for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your engine/equipment.

Your exhaust emissions control system may include parts such as the carburetor or fuel injection system, ignition system, and catalytic converter. Also included may be hoses, belts, connectors, sensors, and other emissions-related assemblies. Your evaporative emission control system may include parts such as: carburetors, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, clamps, connectors, and other associated components.

Where a warrantable condition exists, B&S will repair your engine/equipment at no cost to you including diagnosis, parts, and labor.

Manufacturer's Warranty Coverage:

Small off-road engines and large spark ignited engines less than or equal to 1.0 liter, and any related emissions components of the equipment, are warranted for two years*. If any

emissions-related part on your B&S engine/equipment is defective, the part will be repaired or replaced by B&S.

* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

Owner's Warranty Responsibilities:

- As the engine/equipment owner, you are responsible for the performance of the required maintenance listed in your Operator's Manual. B&S recommends that you retain all receipts covering maintenance on your engine/equipment, but B&S cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance.
- As the engine/equipment owner, you should however be aware that B&S may deny you warranty coverage if your engine/equipment or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.
- You are responsible for presenting your engine/equipment to a B&S distribution center, servicing dealer, or other equivalent entity, as applicable, as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact B&S at 1-800-444-7774 (in USA) or BRIGGSandSTRATTON.COM.

Briggs & Stratton Emissions Control Warranty Provisions

The following are specific provisions relative to your Emissions Control Warranty Coverage. It is in addition to the B&S engine warranty for non-regulated engines found in the Operator's Manual.

1. Warranted Emissions Parts

Coverage under this warranty extends only to the parts listed below (the emissions control systems parts) to the extent these parts were present on the B&S engine and/or B&S supplied fuel system.

- Fuel Metering System**
 - Cold start enrichment system (soft choke)
 - Carburetor and internal parts
 - Fuel pump
 - Fuel line, fuel line fittings, clamps
 - Fuel tank, cap and tether
 - Carbon canister
- Air Induction System**
 - Air cleaner
 - Intake manifold
 - Purge and vent line
- Ignition System**
 - Spark plug(s)
 - Magneto ignition system
- Catalyst System**
 - Catalytic converter
 - Exhaust manifold
 - Air injection system or pulse valve
- Miscellaneous Items Used in Above Systems**
 - Vacuum, temperature, position, time sensitive valves and switches
 - Connectors and assemblies

2. Length of Coverage

For a period of two years from date of original purchase*, B&S warrants to the original purchaser and each subsequent purchaser that the engine is designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board; that it is free from defects in material and workmanship that could cause the failure of a warranted part; and that it is identical in all material respects to

the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the Operator's Manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

3. Consequential Coverage

Coverage shall extend to the failure of any engine components caused by the failure of any warranted emissions parts.

4. Claims and Coverage Exclusions

Warranty claims shall be filed according to the provisions of the B&S engine warranty policy. Warranty coverage does not apply to failures of emissions parts that are not original equipment B&S parts or to parts that fail due to abuse, neglect, or improper maintenance as set forth in the B&S engine warranty policy. B&S is not liable for warranty coverage of failures of emissions parts caused by the use of add-on or modified parts.

Look For Relevant Emissions Durability Period and Air Index Information On Your Small Off-Road Engine Emissions Label

Engines that are certified to meet the California Air Resources Board (CARB) small off-road Emissions Standard must display information regarding the Emissions Durability Period and the Air Index. Briggs & Stratton makes this information available to the consumer on our emissions labels. The engine emissions label will indicate certification information.

The **Emissions Durability Period** describes the number of hours of actual running time for which the engine is certified to be emissions compliant, assuming proper maintenance in accordance with the Operator's Manual. The following categories are used:

Moderate:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 50 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time.

Intermediate:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 250 hours of actual engine running time.

Extended:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 300 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 500 hours of actual engine running time.

For example, a typical walk-behind lawn mower is used 20 to 25 hours per year. Therefore, the **Emissions Durability Period** of an engine with an **intermediate** rating would equate to 10 to 12 years.

Briggs & Stratton engines are certified to meet the United States Environmental Protection Agency (USEPA) Phase 2 or Phase 3 emissions standards. The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emissions requirements.

For engines at or less than 80 cc displacement:

Category C = 50 hours, Category B = 125 hours, Category A = 300 hours

For engines greater than 80 cc displacement and less than 225 cc displacement:

Category C = 125 hours, Category B = 250 hours, Category A = 500 hours

For engines of 225 cc or more displacement:

Category C = 250 hours, Category B = 500 hours, Category A = 1000 hours

California, U.S. EPA, and Briggs & Stratton Corporation Emissions Control Warranty Statement
Your Warranty Rights And Obligations
For Briggs & Stratton Engine Models with "B" or "G" Trim Designation
(Model-Type-Trim Representation xxxxxx xxx Bx or xxxxxx xxx Gx)

January 2014

The California Air Resources Board, U.S. EPA, and Briggs & Stratton (B&S) are pleased to explain the emissions control system warranty on your Model Year 2014-2015 engine. In California, new small off-road engines and large spark ignited engines less than or equal to 1.0 liter must be designed, built, and equipped to meet the State's stringent anti-smog standards. B&S must warrant the emissions control system on your engine for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your engine.

Your exhaust emissions control system may include parts such as the carburetor or fuel injection system, ignition system, and catalytic converter. Also included may be hoses, belts, connectors, sensors, and other emissions-related assemblies.

Where a warrantable condition exists, B&S will repair your engine at no cost to you including diagnosis, parts, and labor.

Manufacturer's Warranty Coverage:

Small off-road engines and large spark ignited engines less than or equal to 1.0 liter, are warranted for two years*. If any emissions-related part on your B&S engine is defective, the part will be repaired or replaced by B&S.

* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

Owner's Warranty Responsibilities:

- As the engine owner, you are responsible for the performance of the required maintenance listed in your Operator's Manual. B&S recommends that you retain all receipts covering maintenance on your engine, but B&S cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance.
- As the engine owner, you should however be aware that B&S may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.
- You are responsible for presenting your engine to a B&S distribution center, servicing dealer, or other equivalent entity, as applicable, as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact B&S at 1-800-444-7774 (in USA) or BRIGGSandSTRATTON.COM.

Briggs & Stratton Emissions Control Warranty Provisions

The following are specific provisions relative to your Emissions Control Warranty Coverage. It is in addition to the B&S engine warranty for non-regulated engines found in the Operator's Manual.

1. Warranted Emissions Parts

Coverage under this warranty extends only to the parts listed below (the emissions control systems parts) to the extent these parts were present on the B&S engine.

- Fuel Metering System**
 - Cold start enrichment system (soft choke)
 - Carburetor and internal parts
 - Fuel pump
- Air Induction System**
 - Air cleaner
 - Intake manifold
- Ignition System**
 - Spark plug(s)
 - Magneto ignition system
- Catalyst System**
 - Catalytic converter
 - Exhaust manifold
 - Air injection system or pulse valve
- Miscellaneous Items Used in Above Systems**
 - Vacuum, temperature, position, time sensitive valves and switches
 - Connectors and assemblies

2. Length of Coverage

For a period of two years from date of original purchase*, B&S warrants to the original purchaser and each subsequent purchaser that the engine is designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board; that it is free from defects in material and workmanship that could cause the failure of a warranted part; and that it is identical in all material respects to the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the Operator's Manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

3. Consequential Coverage

Coverage shall extend to the failure of any engine components caused by the failure of any warranted emissions parts.

4. Claims and Coverage Exclusions

Warranty claims shall be filed according to the provisions of the B&S engine warranty policy. Warranty coverage does not apply to failures of emissions parts that are not original equipment B&S parts or to parts that fail due to abuse, neglect, or improper maintenance as set forth in the B&S engine warranty policy. B&S is not liable for warranty coverage of failures of emissions parts caused by the use of add-on or modified parts.

**Look For Relevant Emissions Durability Period and Air Index Information
On Your Small Off-Road Engine Emissions Label**

Engines that are certified to meet the California Air Resources Board (CARB) small off-road Emissions Standard must display information regarding the Emissions Durability Period and the Air Index. Briggs & Stratton makes this information available to the consumer on our emissions labels. The engine emissions label will indicate certification information.

The **Emissions Durability Period** describes the number of hours of actual running time for which the engine is certified to be emissions compliant, assuming proper maintenance in accordance with the Operator's Manual. The following categories are used:

Moderate:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 50 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time.

Intermediate:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 250 hours of actual engine running time.

Extended:

Engines at or less than 80 cc displacement are certified to be emissions compliant for 300 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 500 hours of actual engine running time.

For example, a typical walk-behind lawn mower is used 20 to 25 hours per year. Therefore, the **Emissions Durability Period** of an engine with an **intermediate** rating would equate to 10 to 12 years.

Briggs & Stratton engines are certified to meet the United States Environmental Protection Agency (USEPA) Phase 2 or Phase 3 emissions standards. The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emissions requirements.

For engines at or less than 80 cc displacement:

Category C = 50 hours, Category B = 125 hours, Category A = 300 hours

For engines greater than 80 cc displacement and less than 225 cc displacement:

Category C = 125 hours, Category B = 250 hours, Category A = 500 hours

For engines of 225 cc or more displacement:

Category C = 250 hours, Category B = 500 hours, Category A = 1000 hours